

Program Structure Template

School of Allied Health Sciences
Program - BPT

Program Code: SAH0103

Batch 2020-2024

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**

Creative Campaign Can be TEDs: This is guiding principle for promotion and wide circulation among various stakeholder.

Guidelines: Similar Mnemonics can be designed by schools.

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

- **To strengthen the main line medical and health services.**
- **To become effective assisting and support system to medical and health personnel.**

Core Values

- **Skilled professional**
- **Multidimensional**
- **Compassion**
- **Management**

1.3 Programme Educational Objectives (PEO)

1.3.1 Writing Programme Educational Objectives (PEO)

Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

PEO 1.(Technical Knowledge and Skill): To educate students with the understanding of Physiotherapy, and to build foundation for theories and practical in the areas of Anatomy, Physiology, Biomechanics, Exercise therapy, Electro therapy, Orthopedics, Neurology, Cardio-pulmonary, Sports, Research and to develop students' design skills through Good Laboratory Practice.

PEO 2.(Higher Studies and Life-long Learning): To provide students with sufficient breadth and depth in Physiotherapy and related areas. To keep up the high standards, value the recent research and apply the best available evidence to their everyday practice, and to enable for higher studies and lifelong learning programs.

PEO 3. (Societal Context, Ethics and Communication Skills): To make the students think of technical solutions for social needs improving living quality with ethical responsibilities in Industry/Government organizations, and to develop students' communication skills to undertake professional responsibilities & multidisciplinary team works.

1.3.2 Map PEOs with Mission Statements:

PEO Statements	School	School
	Mission 1	Mission 2
PEO1:	3	3
PEO2:	3	2
PEO3:	3	3

Enter correlation levels 1, 2, or 3 as defined below:

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

If there is no correlation, put “-“

1.3.3 Program Outcomes (PO's)

Program outcomes are the narrower statements that describe what students are expected to know and be able to do as they graduate. These relate to the skills, knowledge and behavior that students acquire through their program. Following are the statements for POs for Physiotherapy program.

PO1 .Physiotherapy Knowledge.

PO2.Problem analysis

PO3 Design/development of solutions

PO4 : Professional Identity

PO5: Physiotherapy and society

PO6 : Basic medical Knowledge

PO7 : Ethics

PO8 : Individual or team work

PO9 : Communication

PO10 : Physiotherapy Patient evaluation & management

PO11 : Life-long Learning

1.3.4 Mapping of Program Outcome Vs Program Educational Objectives

	PEO1	PEO2	PEO3	PEO4	PEO5
PO1	2	3	3	2	3
PO2	2	3	3	2	3
PO3	2	2	3	3	3
PO4	3	3	3	3	2
PO5	3	3	3	3	2
PO6	2	2	3	2	2
PO7	2	2	3	3	3
PO8	3	3	3	3	2
PO9	3	2	3	2	3
PO10	3	3	2	3	3
PO11	2	3	2	2	3

1. Slight (Low)

2. Moderate (Medium)

3. Substantial (High)

1.3.5 Program Outcome Vs Courses Mapping Table¹:

Program Outcome Courses	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
Sem-1												
Cours101.1	Human Anatomy – I	2	3	2	2	3	2	3	3	3	2	3
Cours101.2	Human Physiology – I	3	3	3	2	3	3	2	2	3	2	2
Cours101.3	Biochemistry	2	3	2	2	2	3	3	3	2	3	3
Cours101.4	Sociology & Psychology	3	2	3	3	3	2	3	3	2	2	2
Cours101.5	Basic Computer & Information English Communication And Soft Skills	2	3	2	2	3	2	3	3	3	2	3
Sem-2												
Cours201.1	Human Anatomy – II	3	3	3	2	3	3	2	2	3	2	2
Cours201.2	Human Physiology II	3	3	3	2	3	3	2	2	3	2	2
Cours201.3	Basic Principles of Biomechanics	2	3	2	2	3	2	3	3	3	2	3
Sem-3												
Course 301.1	Pathology & Microbiology	2	2	3	3	3	3	2	2	3	2	3
Course 301.2	Pharmacology	2	3	2	2	3	2	3	3	3	2	3
Course 301.3	Biomechanics & Kinesiology	3	3	3	2	3	3	2	2	3	2	2
Course 301.4	Foundation of Exercise Therapy	2	3	2	2	2	3	3	3	2	3	3
Course 301.5	Clinical Observation	2	3	2	2	2	3	3	3	2	3	3
Sem-4												
Course 401.1	Exercise Therapy	2	3	2	2	3	2	3	3	3	2	3
Course 401.2	Electrotherapy (LMHF & Equipment care)	3	2	3	3	2	3	3	2	2	3	2
Course 401.3	Medical / Physiotherapy Law & Ethics	2	3	2	2	3	2	3	3	3	2	3
Course 401.4	Clinical Education	2	3	2	2	2	3	3	3	2	3	3
Sem-5												
Course 501.1	Clinical Orthopedics & Traumatology	3	2	3	2	3	2	2	3	2	3	2
Course 501.2	General Surgery including burns and plasticsurgery & Obstetrics and Gynecology	2	3	2	2	3	2	3	3	3	2	3
Course 501.3	General Medicine	2	3	2	2	2	3	3	3	2	3	3
Course 501.4	Community Medicine	2	3	2	2	3	2	3	3	3	2	3
Course 501.5	Interpretation of Diagnostic imaging technology	3	3	3	2	3	3	2	2	3	2	2
Course 501.6	Clinical Education	2	3	2	2	2	3	3	3	2	3	3

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

Sem-6

Course 601.1	Physiotherapy in Orthopedics	2	3	2	2	3	2	3	3	3	2	3
Course 601.2	Physiotherapy in General Medicine and General surgery	3	3	3	2	3	3	2	2	3	2	2
Course 601.3	Clinical Neurology & psychiatry	2	3	2	2	2	3	3	3	2	3	3
Course 601.4	Introduction to recent trends in physiotherapy	2	3	2	2	3	2	3	3	3	2	3
Course 601.5	Clinical education	3	2	3	2	2	3	3	2	2	3	3

Sem-7

Course 701.1	Physiotherapy in neurology	2	3	2	2	3	2	3	3	3	2	3
Course 701.2	Biostatistics & Research Methodology	2	3	2	2	3	2	3	3	3	2	3
Course 701.3	Health Promotion & Fitness	3	2	3	2	3	3	3	2	3	2	2
Course 701.4	Clinical Cardio-vascular & Pulmonary	3	2	3	2	3	3	3	2	3	3	2
Course 701.5	Principles of management	2	3	2	2	3	2	3	3	3	2	3
Course 701.6	Clinical Education	2	3	2	2	3	2	3	3	3	2	3

Sem-8

Course 801.1	Physiotherapy in cardiovascular, pulmonary intensive care	2	3	2	3	3	3	2	3	2	2	3
Course 801.2	Community Physiotherapy	2	3	2	3	3	3	2	3	3	2	2
Course 801.3	Clinical reasoning and evidence based physiotherapy	2	3	2	2	3	2	3	3	3	2	3
Course 801.4	Administration & teaching skills	3	2	3	2	3	3	2	3	2	2	3
Course 801.5	Research Project	2	3	2	2	3	2	3	3	3	2	3
Course 801.6	Clinical Education	2	3	2	2	3	2	3	3	3	2	3

Internship

Clinical Internship

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

Program Structure Template
BPT Program Structure
School of Allied Health Sciences
Program: BPT
Programcode: - SAH0103
Batch: 2020-2024
TERM: I

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
1.	35001	BPT 106	Human Anatomy – I	4	1		5
2.	35002	BPT 107	Human Physiology – I	4	1		5
3.	35261	BPT 120	Biochemistry	4	0		4
4.	35262	BPT 121	Psychology & Sociology	4	0		4
5.	35263	BPT 122	Basic computer & Information English Communication and soft skills	3	0		3
TOTAL				19	2		21
Practical/Viva-Voce/Jury							
6.	35008	BPT 156	Human Anatomy-1			4	2
7.	35009	BPT 157	Human Physiology -1			2	1
TOTAL CREDITS				24			3

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TERM: II

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
8.	35048	BPT 113	Human Anatomy-2 (Including Applied Anatomy)	5	1		6
9.	35049	BPT 114	Human Physiology -2 (Including Applied Physiology)	5	1		6
10.	35384	BPT 123	Basic principles of Biomechanics	5	1		6
TOTAL				15	3		18
Practical/Viva-Voce/Jury							
11.	35054	BPT 153	Human Anatomy-2			4	2
12.	35055	BPT 154	Human Physiology -2			4	2
13.	35056	BPT 159	Basic principles of Biomechanics			3	1
TOTAL CREDITS				23			

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TERM: III

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
14.	35275	BPT 216	Pathology & Microbiology	6	0	0	6
15.	35276	BPT 217	Pharmacology	4	0	0	4
16.	35154	BPT 209	Biomechanics & Kinesiology	4	1	0	5
17.	35155	BPT 210	Foundation of Exercise Therapy	4	1	0	5
TOTAL				18	2	16	
Practical/Viva-Voce/Jury							
18.	35158	BPT 259	Biomechanics & Kinesiology			4	2
19.	35159	BPT 260	Foundation of Exercise Therapy			4	2
20.	35157	BPT 003	Clinical observation			5	2
TOTAL CREDITS				26			

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TERM: IV

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
21.	35385	BPT 219	Exercise Therapy	6	1	-	7
22.	35386	BPT 220	Electrotherapy (LMHF & Equipment care)	6	1	-	7
23.	35383	BPT 218	Medical/ Physiotherapy Law and Ethics	3	1	-	4
Practical/Viva-Voce/Jury							
24.	35387	BPT 264	Exercise Therapy			6	3
25.	35388	BPT 265	Electrotherapy			6	3
26.	35389	BPT 266	Clinical Observation			6	3
TOTAL CREDITS				27			

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TERM: V

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
27.	35266	BPT 308	Clinical Orthopaedics & Traumatology	3	0	-	3
28.	35265	BPT 309	General Surgery including burns and plastic surgery & Obstetrics and Gynecology	3	0	-	3
29.	35264	BPT 310	General Medicine	3	0	-	4
30.	35267	BPT 311	Community Medicine	4	0	0	3
31.	35268	BPT 312	Interpretation of Diagnostic imaging technology	2	0	-	2
Practical/Viva-Voce/Jury							
32.	35269	BPT 350	Clinical Orthopedics & Traumatology			2	1
33.	35274	BPT 359	General Surgery including burns and plastic surgery & Obstetrics and Gynecology			2	1
34.	35273	BPT 358	General Medicine	0	0	2	1
35.	35270	BPT 351	Community Medicine			2	1
36.	35271	BPT 352	Interpretation of Diagnostic imaging technology			2	1
37.	35272	BPT 353	Clinical Education			8	4
TOTAL CREDITS				24			

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TERM: VI

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
38.	35375	BPT 316	Physiotherapy in Orthopedics & sports	5	0		5
39.	35376	BPT 313	Physiotherapy in General Medicine and Generalsurgery	5	0		5
40.	35377	BPT 314	Clinical Neurology & Psychiatry	3	0		3
41.	35378	BPT 315	Introduction to recent trends in Physiotherapy	1	0		1
TOTAL				14	0	22	
Practical/Viva-Voce/Jury							
42.	35379	BPT 360	Physiotherapy in Orthopedics & sports			4	2
43.	35380	BPT 361	Physiotherapy in General Medicine and Generalsurgery			4	2
44.	35381	BPT 362	Clinical Neurology & Neurosurgery			3	1
45.	35382	BPT 363	Clinical Education			12	6
TOTAL CREDITS				25			

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TERM: VII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
46.	35442	BPT 460	Physiotherapy in Neurology	5	0	-	5
47.	35443	BPT 462	Biostatistics & Research Methodology	4	0	-	4
48.	35444	BPT 463	Health Promotion and Fitness	1	0	-	1
49.	35445	BPT 464	Clinical cardiovascular & pulmonary	3	0	-	3
50.	35446	BPT 465	Principles of Management, Critique inquiry, case presentation and discussion	1	0	-	1
Practical/Viva-Voce/Jury							
51.	35447	BPT 441	Physiotherapy in Neurology & psychosomatic disorder	-	-	4	2
52.	35448	BPT 442	Health Promotion and Fitness			2	1
53.	35449	BPT 443	Clinical cardiovascular & pulmonary			2	1
35450 BPT 444 Clinical Education				12			6
TOTAL CREDITS							24

BPT Program Structure
School of Allied Health Sciences
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TERM: VIII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits
				L	T	P	
THEORY SUBJECTS							
54.		BPT 466	Physiotherapy in cardiovascular, pulmonary & intensive care	5	0	-	
55.		BPT 467	Community Physiotherapy	4	0	-	
56.		BPT 468	Clinical reasoning & Evidence based physiotherapy	1	0	-	
57.		BPT 469	Administration and Teaching Skills	1	0	-	
Practical/Viva-Voce/Jury							
58.		BPT 445	Physiotherapy in cardiovascular, pulmonary & intensive care	-	-	4	2
59.		BPT 446	Community Physiotherapy	-	-	4	2
60.		BPT 447	Clinical reasoning & Evidence based physiotherapy			2	1
61.		BPT 448	Administration and Teaching Skills			2	1
62.		BPT 450	Research Project			4	2
63.		BPT 449	Clinical Education			12	6
TOTAL CREDITS				25			

Table 2: BPT Program Outcome V/s Course Mapping Table¹:

Program Outcome Courses	Course Code	Course Name		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
SEMESTER I														
Theory														
Course 1.1	BPT-106	Human Anatomy I	CO1	3	3	2	3	3	3	3	2	3	3	2
			CO2	3	2	3	2	3	3	2	3	3	3	3
			CO3	2	3	3	3	2	2	3	3	3	3	3
			CO4	3	3	3	3	2	3	2	3	3	3	3
			CO5	3	3	3	3	2	3	2	3	3	3	3
Course 1.2	BPT-107	Human Physiology I	CO1	3	3	3	3	2	3	2	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	2	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	2	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 1.3	BPT-120	Biochemistry	CO1	3	3	3	3	2	3	2	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	2	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	2	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
			CO6	3	3	3	3	2	3	2	3	3	3	3
Course 1.4	BPT-121	Sociology & Psychology	CO1	3	3	2	3	3	3	3	2	3	3	2
			CO2	3	2	3	2	3	3	2	3	3	3	3
			CO3	2	3	3	3	2	2	3	3	3	3	3
			CO4	3	3	3	3	2	3	2	3	3	3	3
			CO5	3	3	3	3	2	3	2	3	3	3	3
			CO6	3	3	3	3	2	3	2	3	3	3	3
Course 1.5	BPT 122	Basic computer & IEC & soft skills	CO1	3	3	2	3	3	3	3	2	3	3	2
			CO2	3	2	3	2	3	3	2	3	3	3	3

			CO3	2	3	3	3	2	2	3	3	3	3	3
			CO4	3	3	3	3	2	3	2	3	3	3	3
			CO5	3	3	3	3	2	3	2	3	3	3	3
			CO6	3	3	3	3	2	3	2	3	3	3	3
Practical														
Course 1.1.1	BPT-156	Human Anatomy- I	CO1	3	3	2	3	3	3	3	2	3	3	2
			CO2	3	2	3	2	3	3	2	3	3	3	3
			CO3	2	3	3	3	2	2	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	2	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 1.2.2	BPT-157	Human Physiology I	CO1	3	3	3	3	2	3	2	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	2	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	2	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
SEMESTER 2														
Theory														
Course 2.1	BPT 113	Human Anatomy II	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO.3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO 5	3	3	3	3	3	3	3	3	3	3	3
Course 2.2	BPT 114	Human Physiology II	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 2.3	BPT 123	Basic Principles Of Biomechanics	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
			CO6	3	3	3	3	3	3	3	3	3	3	3
Practical														
Course 2.1.1	BPT 153	Human Anatomy II	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO.3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO 5	3	3	3	3	3	3	3	3	3	3	3
Course 2.2.2	BPT	Human	CO1	3	3	3	3	3	3	3	3	3	3	3

	154	Physiology II												
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 2.3.3	BPT-159	Basic Principles Of Biomechanics	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
			CO6	3	3	3	3	3	3	3	3	3	3	3
SEMESTER 3														
Theory														
Course 3.1	BPT-216	Pathology & Microbiology	CO1	2	2	3	2	2	3	2	2	2	2	2
			CO2	3	2	2	3	3	3	3	2	3	2	3
			CO3	2	3	2	2	3	3	3	2	2	2	2
			CO4	3	2	2	3	2	2	2	3	2	2	2
			CO5	2	3	2	3	2	2	3	2	2	2	2
			CO6	3	2	3	2	3	2	3	2	3	2	3
Course 3.2	BPT-217	Pharmacology	CO.1	2	2	3	2	2	2	2	3	2	3	3
			CO.2	3	2	2	2	3	3	2	2	2	3	2
			CO.3	3	2	3	2	2	2	2	2	2	3	2
			CO.4	2	2	2	2	3	3	2	3	2	2	2
			CO.5	3	2	3	3	2	2	3	2	2	2	2
			CO.6	2	3	2	2	3	3	2	2	3	3	2
Course 3.3	BPT-209	Biomechanics & Kinesiology	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	2	2	3	3	3	3	3	3	3	3	3
			CO3	3	2	3	3	3	3	3	3	2	2	2
			CO4	3	3	2	2	3	3	3	3	3	3	3
			CO5	3	3	2	2	3	2	3	3	3	3	2
			CO6	3	3	3	2	2	3	2	3	2	3	2
Course 3.4	BPT-210	Foundation of Exercise Therapy	CO1	2	3	3	3	3	3	3	3	3	2	2
			CO2	3	3	2	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	2	3	2

			CO5	3	3	2	2	3	2	3	3	3	3	2
			CO6	3	3	3	2	2	3	2	3	2	3	2
Practical														
Course 3.3.1	BPT-259	Biomechanics & Kinesiology	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	2	2	3	3	3	3	3	3	3	3	3
			CO3	3	2	3	3	3	3	3	3	2	2	2
			CO4	3	3	2	2	3	3	3	3	3	3	3
			CO5	3	3	2	2	3	2	3	3	3	3	2
			CO6	3	3	3	2	2	3	2	3	2	3	2
Course 3.4.2	BPT-260	Foundation of Exercise Therapy	CO1	2	3	3	3	3	3	3	3	3	2	2
			CO2	3	3	2	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	3	3	2	3	2
			CO5	3	3	2	2	3	2	3	3	3	3	2
			CO6	3	3	3	2	2	3	2	3	2	3	2
SEMESTER 4														
Theory														
Course 4.1	BPT 219	Exercise Therapy	CO1	3	3	3	2	3	3	2	3	3	3	2
			CO2	2	3	3	3	3	2	3	2	3	3	3
			CO3	3	3	3	3	3	3	3	3	2	3	2
			CO4	2	3	3	3	2	3	2	3	3	3	3
			CO5	3	3	2	3	3	3	3	3	3	3	3
Course 4.2	BPT 220	Electrotherapy (LMHF & Equipment care)	CO1	2	3	2		3	3	2	3	3	3	3
			CO2	3	3	2	3	3	3	3	3	3	3	3
			CO3	3	3	2	3	3	3	3	3	3	3	3
			CO4	3	2		3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	2	3	3	3	3	3
Course 4.3	BPT 218	Medical / Physiotherapy Law & Ethics	CO1	2	2	3	3	2	2	2	2	2	2	2
			CO2	2	3	2	2	2	2	2	2	2	2	2
			CO3	2	2	2	3	2	3	2	2	2	2	2

			CO4	3	2	2	3	2	2	2	2	2	2	2
			CO5	3	2	2	2	2	2	2	2	2	2	2
Practical														
Course 4.1.1	BPT-264	Exercise Therapy	CO1	3	3	3	2	3	3	2	3	3	3	2
			CO2	2	3	3	3	3	2	3	2	3	3	3
			CO3	3	3	3	3	3	3	3	3	2	3	2
			CO4	2	3	3	3	2	3	2	3	3	3	3
			CO5	3	3	2	3	3	3	3	3	3	3	3
Course 4.2.1	BPT-265	Electrotherapy (LMHF & Equipment care)	CO1	2	3	2		3	3	2	3	3	3	3
			CO2	3	3	2	3	3	3	3	3	3	3	3
			CO3	3	3	2	3	3	3	3	3	3	3	3
			CO4	3	2		3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	2	3	3	3	3	3
SEMESTER 5														
Theory														
Course 5.1	BPT-308	General Medicine including Paediatrics & Pshychiatry	CO1	3	3	3	2	2	3	3	3	3	3	3
			CO2	2	3	3	3	3	3	3	3	3	2	3
			CO3	2	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	3	3	3	3
			CO5	3		3	3	3	3	3	3	3	3	3
Course 5.2	BPT-309	General Surgery including burns and plasticsurgery& Obstetrics and Gynecology	CO1	3	3	2	2	3	3	3	3	3	2	3
			CO2	2	3	3	3	3	2	3	3	3	3	3
			CO3	3	3	2	2	2	2	2	2	2	2	3
			CO4	3	3	3	3	3	2	2	3	2	2	3
			CO5	3	3	2	3	3	2	3	3	3	3	3
Course 5.3	BPT-310	Clinical Orthopedics & Traumatology	CO1	3	3	3	2	2	3	3	3	3	3	3
			CO2	2	3	3	3	3	3	3	3	3	2	3
			CO3	2	3	3	3	3	3	3	3	3	3	3

			CO4	3	3	2	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 5.4	BPT-311	Community Medicine	CO1	3	3	3	3	3	2	3	3	3	2	3
			CO2	3	3	3	3	3	3	2	3	3	3	3
			CO3	3	3	3	2	3	3	3	3	3	3	3
			CO4	2	3	3	3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	3	3	3	2	3	3
Course 5.5	BPT-312	Interpretation of Diagnostic imaging technology	CO1	3	3	3	3	3	2	3	3	3	2	3
			CO2	3	3	3	3	3	3	2	3	3	3	3
			CO3	3	3	3	2	3	3	3	3	3	3	3
			CO4	2	3	3	3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	3	3	3	2	3	3
Practical														
Course 5.1.1	BPT-358	General Medicine including Paediatrics & Pshychiatry	CO1	3	3	3	2	2	3	3	3	3	3	3
			CO2	2	3	3	3	3	3	3	3	3	2	3
			CO3	2	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 5.2.2	BPT-359	General Surgery including burns and plasticsurgery& Obstetrics and Gynecology	CO1	3	3	2	2	3	3	3	3	3	2	3
			CO2	2	3	3	3	3	2	3	3	3	3	3
			CO3	3	3	2	2	2	2	2	2	2	2	3
			CO4	3	3	3	3	3	2	2	3	2	2	3
			CO5	3	3	2	3	3	2	3	3	3	3	3
Course 5.3.3	BPT-350	Clinical Orthopedics & Traumatology	CO1	3	3	3	2	2	3	3	3	3	3	3
			CO2	2	3	3	3	3	3	3	3	3	2	3
			CO3	2	3	3	3	3	3	3	3	3	3	3
			CO4	3	3	2	3	3	3	3	3	3	3	3

			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 5.4.4	BPT-351	Community Medicine	CO1	3	3	3	3	3	2	3	3	3	2	3
			CO2	3	3	3	3	3	3	2	3	3	3	3
			CO3	3	3	3	2	3	3	3	3	3	3	3
			CO4	2	3	3	3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	3	3	3	2	3	3
Course 5.5.5	BPT-352	Interpretation of Diagnostic imaging technology	CO1	3	3	3	3	3	2	3	3	3	2	3
			CO2	3	3	3	3	3	3	2	3	3	3	3
			CO3	3	3	3	2	3	3	3	3	3	3	3
			CO4	2	3	3	3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	3	3	3	2	3	3
SEMESTER 6														
Theory														
Course 6.1	BPT-313	Physiotherapy in Orthopedics	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	2	3	3
Course 6.2	BPT-314	Physiotherapy in General Medicine & General surgery	CO1											
				3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	2	3	3
Course 6.3	BPT-315	Clinical Neurology & psychiatry	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 6.4	BPT-316	Introduction to recent trends in	CO1	3	3	3	3	3	2	3	3	3	2	3

		physiotherapy												
			CO2	3	3	3	3	3	3	3	2	3	3	3
			CO3	3	3	3	2	3	3	3	3	3	3	3
			CO4	2	3	3	3	3	3	3	3	3	3	3
			CO5	3	2	3	3	3	3	3	3	3	2	3
Practical														
Course 6.1.1	BPT-362	Physiotherapy in Orthopedics	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	3	3	3	3	3	3	3	3	3	2	3
			CO3	3	3	3	3	3	3	3	3	3	3	2
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 6.2.2	BPT-363	Physiotherapy in General Medicine & General surgery	CO1											
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 6.3.3	BPT-365	Clinical Neurology & psychiatry	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
SEMESTER 7														
Theory														
Course 7.1	BPT-460	Physiotherapy In Neurology & Psychosomatic Disorder	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 7.2	BPT-462	Biostatistics & Research Methodology	CO1	3	3	3	3	3	3	3	2	3	3	3

			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
			CO6	3	3	3	3	3	3	3	3	3	3	3
Course 7.3	BPT-463	Health Promotion, Fitness & Wellness	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 7.4	BPT-464	Clinical Cardio-vascular & Pulmonary	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 7.5	BPT-465	Principles of management	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Practical														
Course 7.1.1	BPT-441	Physiotherapy In Neurology & Psychosomatic Disorder	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 7.3.2	BPT-442	Health Promotion, Fitness & Wellness	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3

			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 7.4.3	BPT-443	Clinical Cardio-vascular & Pulmonary	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	3	3	3	3	3	3	3	3	3	2	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 7.6.4	BPT 444	Clinical Education	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
SEMESTER 8														
Theory														
Course 8.1	BPT466	Physiotherapy in cardiovascular, pulmonary intensive care	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	2	3	3	3	2	3	3
			CO3	2	2	3	2	3	3	2	2	3	2	2
			CO4	3	3	3	3	2	2	2	3	2	3	3
			CO5	3	3	2	3	2	3	3	3	3	2	2
Course 8.2	BPT467	Community Physiotherapy	CO1	3	3	3	3	3	3	2	3	3	3	3
			CO2	3	3	3	3	2	3	3	2	2	3	3
			CO3	2	2	3	3	3	3	2	3	3	2	2
			CO4	3	3	3	3	2	2	3	3	2	3	3
			CO5	2	3	3	2	3	3	3	3	2	2	2
Course 8.3	BPT468	Clinical reasoning and evidence based physiotherapy	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3

			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 8.4	BPT 469	Administration & teaching skills	CO1	3	3	3	3	3	3	3	3	2	3	3
			CO2	3	2	3	2	2	3	2	3	2	3	3
			CO3	3	3	2	3	3	2	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Practical														
Course 8.1.1	BPT444	Physiotherapy in cardiovascular, pulmonary intensive care	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	2	3	3	3	2	3	3
			CO3	2	2	3	2	3	3	2	2	3	2	2
			CO4	3	3	3	3	2	2	2	3	2	3	3
			CO5	3	3	2	3	2	3	3	3	3	2	2
Course 8.2.2	BPT445	Community Physiotherapy	CO1	3	3	3	3	3	3	2	3	3	3	3
			CO2	3	3	3	3	2	3	3	2	2	3	3
			CO3	2	2	3	3	3	3	2	3	3	2	2
			CO4	3	3	3	3	2	2	3	3	2	3	3
			CO5	2	3	3	2	3	3	3	3	2	2	2
Course 8.3.3	BPT446	Clinical reasoning and evidence based physiotherapy	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	2	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
Course 8.4.4	BPT 447	Administration & teaching skills	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	2	3	2	2	3	2	3	2	3	3
			CO3	3	3	2	3	3	2	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	3	3
Course 8.5.5	BPT 443	Clinical Education	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3

			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3
			CO5	3	3	3	3	3	3	3	3	3	2	3
Course 8.6.6	BPT 444	Clinical Education	CO1	3	3	3	3	3	3	3	2	3	3	3
			CO2	3	3	3	3	3	3	3	3	3	3	3
			CO3	3	3	3	3	3	3	3	3	3	2	3
			CO4	3	3	3	3	3	3	3	3	3	3	3

FIRST SEMESTER

School: School Of Allied Health Sciences

Batch : 2020-24

Program: Bachelors Of Physiotherapy(BPT)		Current Academic Year: 2020-2021
Branch: Physiotherapy		Semester: I
1	Course Code	BPT 106
2	Course Title	HUMAN ANATOMY –I
3	Credits	5
4	Contact Hours (L-T-P)	4-1-0
	Course Type	Compulsory
5	Course Objective	<ol style="list-style-type: none"> 1. The student will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapy and occupational therapy. 2. In addition the student will be able to fulfill with 75% accuracy (as measured written & oral internal evaluation) the following objectives of the course.
6	Course Outcomes	<p>CO1: To identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions.</p> <p>CO2: To understand the basic principles of embryology including genetic inheritance and stages involved in development of the organs and systems from the time of conceptions till birth.</p> <p>CO3: To understand the bones, joints, muscles, vascular and nerve supply of upper limb.</p> <p>CO4: To know about basic anatomical knowledge of boundaries and contents of thoracic cavity.</p> <p>CO5: To understand the bones, joints, muscles, vascular and nerve supply of head and neck.</p>
7	Course Description	It is designed to provide students with the working knowledge of the structure of the human body which is essential foundation for their clinical studies.
8	Outline syllabus	CO Mapping
	Unit 1	General anatomy
	A	Introduction, Skeleton, Joints, Muscles
	B	Cardiovascular system, Lymphatic system, Nervous system
	C	Skin and fascia, Connective tissue, ligaments and raphe, Principles of radiography
	Unit 2	Upper extremity
	A	Muscles – origin, insertion, nerve supply and actions.
	B	Osteology: Clavicles, Scapula, Humerus, Radius, Ulna,

		Carpals, Metacarpals, Phalanges.	CO3
C		Soft parts: Breast, pectoral region, axilla, front of arm, back of arm, cubital fossa, front of forearm, back of forearm, palm, dorsum of hand, muscles, nerves, blood vessels and lymphatic drainage of upper extremity	CO1, CO3
Unit 3		Upper extremity Joints	
A		Shoulder girdle, shoulder joint, elbow joints,	CO1, CO3
B		Radioulnar joint, wrist joint and joints of the hand.	CO1, CO3
C		Arches of hand, skin of the palm and dorsum of hand.	CO1, CO3
Unit 4		Thorax	
A		Cardio–Vascular System Mediastinum: Divisions and contents Pericardium.	CO2, CO4
B		Thoracic Wall: position, shape and parts of the heart; conducting System; blood Supply and nerve supply of the heart; names of the blood vessels and their distribution in the body– region wise.	CO2, CO4
C		Respiratory system–Outline of respiratory passages: Pleura and lungs: position, parts, relations, blood supply and nerve supply; Lungs – emphasize on bronchopulmonary segments. Diaphragm: Origin, insertion, nerve supply and action, openings in the diaphragm. Intercostal muscles and Accessory muscles of respiration: Origin, insertion, nerve supply and action	CO2, CO4
Unit 5		Head and Neck	
A		Osteology: Mandible and bones of the skull.	CO1, CO5
B		Soft parts: Scalp, Muscles of the face and neck and their nerve and blood supply-extra ocular muscles, triangles of the neck.	CO1, CO5
C		Gross anatomy of eyeball, nose, ears and tongue Thyroid gland, salivary gland Temporomandibular joint with muscles of mastication	CO1, CO5
Mode of examination		Theory/Jury/Practical/Viva	
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*		<ol style="list-style-type: none"> 1. B D Chaurasia’s Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas- Inderbir Singh. 4. Richard S. Snell- Clinical Anatomy. 	
Other References		<ol style="list-style-type: none"> 1. Kieth L Moorie, Clinically Oriented Anatomy. 2. A K Datta, Essentials Of Human Anatomy: Thorax And Abdomen 3. Inderbir Singh, Human Osteology. 	

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	2	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	2	3	3	3	3	3
CO201.5	3	3	3	3	3	2	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelors of Physiotherapy(BPT)		Current Academic Year: 2020-2021
Branch: Physiotherapy		Semester: I
1	Course Code	BPT 107
2	Course Title	HUMAN PHYSIOLOGY – I
3	Credits	5
4	Contact Hours (L-T-P)	4-1-0
	Course Type	Compulsory
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to demonstrate an understanding of elementary human physiology
6	Course Outcomes	<p>CO1: Understand the cell physiology in detail including the transport mechanism of human body and blood and body fluid distribution and composition.</p> <p>CO2: Understand interaction and integration of different organ systems in health and diseases special nerve-muscle physiology.</p> <p>CO3: Understand the functional mechanisms of cardiovascular system, student should be able to tell about the conducting system of heart, cardiac muscle, cardiac output along with the calculation and handling of equipment e.g. measurement of blood pressure</p> <p>CO4: Describe the physiology of respiratory system which include mechanics of breathing, spirometry, transport of gases and the common disorders of respiratory system.</p> <p>CO5: Demonstrate in depth knowledge of digestive and endocrine system.</p>

7	Course Description	The course is designed to assist the students to acquire knowledge of the normal human Physiology of various body systems and understand the alternation in physiology in disease and practice of Physiotherapy as applicable for each systemic disorder		
8	Outline syllabus	CO Mapping		
	Unit 1	General & Nerve Muscle Physiology		
	A	Intercellular communication & body fluids, membrane potential. Structure & functions of nerve tissues, physiological properties of nerve fibers, nerve fiber types & functions. Degeneration and Regeneration in Peripheral Nerves.		CO1, CO2
	B	Homeostasis, Transport across cell membrane, NMJ.		CO1,CO2
	C	Structure & function of cell organelles, skeletal muscle & smooth muscle. Difference between skeletal, smooth & cardiac muscle.		CO1,CO2
	Unit 2	Blood		
	A	Composition & functions of blood, plasma proteins, leucocytes, platelets, Blood coagulation & Immunity.		CO1,CO3
	B	Haemoglobin, Erythrocytes, Anaemia & jaundice,		CO1, CO3
	C	Blood groups & immunity		CO1,CO3
	Unit 3	Cardiovascular System		
	A	Cardiac Muscle, physiological anatomy of the heart, general principles of circulation & CVRM.		CO1,CO3
	B	Cardiac Cycle, Cardiac Output, Blood Pressure.		CO1, CO3
	C	Heart Sounds, ECG, Heart Rate, Hypertension & Shock.		CO1,CO3
	Unit 4	The Respiratory System		
	A	Physiological anatomy of respiratory system & Mechanics of respiration.		CO1,CO4
	B	Transport of Gases & Regulation of respiration		CO1,CO4
	C	Hypoxia, Physiology of Exercise & High Altitude.		CO1,CO4
	Unit 5	Digestive System		
	A	Physiological anatomy of GIT, Saliva, Stomach, Pancreas, Liver & Gall Bladder.		CO2,C05
	B	Small Intestine & Large Intestine,		CO2,C05
	C	Digestion and Absorption in GIT.		CO2,C05
	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%

Text book/s*	1. Sembulingum, K., Essentials of Medical Physiology 2. Dr. S.C. Choudhary, Concise medical physiology 3. Dr. C.C. Chatterjee., Human physiology 4. Ganong, Review of Medical Physiology 5. Samson Wright's Applied Physiology 6. Guyon & Halls, Medical Physiology	
Other References	1. Sam san writes applied physiology handbook -by Cyril a keeleericB.Neil 2. Best and Taylor's physiological basic of Medical practice- C.H. Best aetal 3. Medical physiology Dr. A.C. Gutton. Review of Medical Physiology William FooGanong	

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	2	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	2	3	3	2	3	3	3	2
CO201.5	3	3	3	3	3	3	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelors of Physiotherapy(BPT)		Current Academic Year: 2020-2021
Branch: Physiotherapy		Semester: I
1	Course Code	BPT 120
2	Course Title	BIOCHEMISTRY
3	Credits	4

4	Contact Hours (L-T-P)	4-0-0
	Course Type	Compulsory
5	Course Objective	The students will be able to understand the biochemical change of the various elements of the body at cellular level and extra cellular level.
6	Course Outcomes	<p>CO1: The graduate should be able to identify the different types of biomolecules (carbohydrate, lipid and amino acid), to understand the chemistry of various types of biomolecules in maintaining the health and evaluate the role of their deficiency in developing clinical conditions after the completion of the course.</p> <p>CO2: The graduate should be able to know the importance of different types of enzymes concerned with carbohydrate, lipid and protein digestion along with the importance of their estimation in different clinical conditions, and to understand the chemistry of nucleic acids (DNA and RNA) and their application in determining the genetic diseases after the completion of the course.</p> <p>CO3: The graduate should be able to differentiate and know the importance of different pathways concerned with carbohydrate, lipid and protein metabolism along with their application in different physical and clinical conditions after the completion of the course.</p> <p>CO4: The graduate should be able to understand the importance of nutrition and calorific values of different types of food products, able to explain the energy expenditure in various types of physical activities, understand the role of vitamins and minerals in health and diseases after the completion of a course.</p> <p>CO5: The graduate should be able to differentiate different types of cell organelles, understand the mechanism of muscle contraction and importance of various connective tissue proteins after the completion of a course.</p> <p>CO6: The graduate should be able to understand the action of different types of hormone in human body, importance of maintenance of acid base balance and normal level of different blood constituents and apply his or her knowledge to identify the clinical condition after the completion of a course</p>
7	Course Description	The course describe structures & functions of cell in brief; normal functions of different components of food, Enzymes, define Basal metabolic rate & factors affecting the same [in brief], with special reference to obesity; nutritional aspects of carbohydrates, lipids, proteins & vitamins & their metabolism with special reference to obesity; define enzymes, discuss in

		brief, factors affecting enzyme activity; describe in details biochemical aspects of muscle contraction.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Nutrition –Introduction, Importance of nutrition, Calorific values, Respiratory quotient–Definition, and its significance Energy requirement of a person-Basal metabolic rate: Definition, Normal values, factor affecting BMR Special dynamic action of food. Physical activities- Energy expenditure for various activities. Calculation of energy requirement of a person Balanced diet	CO1, CO2
	B	Recommended dietary allowances Role of carbohydrates in diet: Digestible carbohydrates and dietary fibers Role of lipids in diet	CO1, CO2
	C	Role of proteins in diet: Quality of proteins - Biological value, net protein utilization, Nutritional aspects of proteins-essential and non-essential amino acids. Nitrogen balance Nutritional disorders.	CO1, CO2
	Unit 2		
	A	Carbohydrate Chemistry– Definition, general classification with examples, Glycosidic bond Structures, composition, sources, properties and functions of Monosaccharides, Disaccharides, Oligosaccharides and Polysaccharides. Glycosaminoglycan (mucopolysaccharides)	CO1,CO3
	B	Lipid Chemistry–Definition, general classification Definition, classification, properties and functions of Fatty acids, Triacylglycerol, Phospholipids, Cholesterol Essential fatty acids and their importance Lipoproteins: Definition, classification, properties, Sources and function Ketone bodies	CO2, CO3
	C	Amino acid chemistry: Definition, Classification, Peptide bonds Peptides: Definition, Biologically important peptides Protein chemistry: Definition, Classification, Functions of proteins	CO2,CO3
	Unit 3		
	A	Enzymes –Definition, Active site, Cofactor(Coenzyme, Activator), Proenzyme Classification with examples, Factors effecting enzyme activity, Enzyme inhibition and significance, Isoenzymes, Diagnostic enzymology (clinical significance of enzymes)	CO2,CO4
	B	Nucleotide and Nucleic acid Chemistry-Nucleotide	CO2,C04

		composition, functions of free nucleotides in body. Nucleic acid (DNA and RNA) chemistry: Difference between DNA and RNA, Structure of DNA (Watson and Crick model), Functions of DNA. Structure and functions of tRNA, rRNA, mRNA.	
	C	Digestion and Absorption- General characteristics of digestion and absorption, Digestion and absorption of carbohydrates, proteins and lipids. Disorders of digestion and absorption – Lactose intolerance.	CO2, CO4
	Unit 4		
	A	Carbohydrate Metabolism-Introduction, Glycolysis– Aerobic, Anaerobic Citric acid cycle, Substrate level phosphorylation. Glycogen metabolism – Glycogenesis, Glycogenolysis, Metabolic disorders glycogen, Gluconeogenesis, Cori cycle Hormonal regulation of glucose, Glycosuria, Diabetes mellitus.	CO3, CO4
	B	Lipid Metabolism-Introduction to lipid metabolism, Lipolysis, Oxidation of fatty acids-oxidation of fatty acids, Lipogenesis - De novo synthesis of fatty acids, chain elongation, desaturation, triacylglycerol synthesis, fat metabolism in adipose tissues Ketone body metabolism: Ketone body formation (ketogenesis), utilization (ketolysis), ketosis, Rothera's test. Cholesterol metabolism: synthesis, degradation, cholesterol transport Hypercholesterolemia and its effects (atherosclerosis and coronary heart diseases) Hypocholesterolemic agents, Common hyperlipoproteinemia, Fatty liver	CO3, CO4
	C	Amino acid and Protein Metabolism- Catabolism of amino acids - Introduction, transamination, deamination, Fate of ammonia, transport of ammonia, Urea cycle Specialized products formed from amino acids- from glycine, arginine, methionine, phenylalanine and tyrosine.	CO3, CO4
	Unit 5		
	A	Vitamins-Definition, classification according to solubility, Individual vitamins- Sources, Coenzyme forms, functions, RDA, digestion, absorption and transport, deficiency and toxicity. Minerals- Definition, Sources, RDA, Digestion, absorption, transport, excretion, functions, disorder of Individual minerals - Calcium, phosphate, iron, Magnesium, fluoride, selenium, molybdenum, copper. Phosphate, calcium and iron in detail.	CO4, CO6

B	Cell Biology-Introduction, Cell structure, Cell membrane structure and function, various types of absorption. Intracellular organelles and their functions, briefly on cytoskeleton. Muscle Contraction-Contractile elements in muscle, briefly on the process of muscle contraction, Energy for muscle contraction. Biochemistry of Connective tissue-Introduction, various connective tissue proteins: Collagen, elastin - Structure and associated disorders. Glycoproteins, Proteoglycans.	CO4,C06	
C	Hormone Action-Definition, classification, Mechanism of hormone action. Receptors, signal transduction, second messengers and cell function. Acid-Base balance-Acids, bases and buffers, pH. Buffer systems of the body, bicarbonate buffer system Role of lungs and kidneys in acid base balance, Acid base imbalance. Clinical Biochemistry- normal levels of blood and urine constituents, relevance of blood and urine levels of glucose, urea, uric acid, creatine , calcium, phosphates, ph and bicarbonates. Liver function tests & renal function tests.	CO4,C06	
Mode of examination	Theory/Jury/Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	30 %	20%	50%
Text book/s*	<ol style="list-style-type: none"> Biochemistry by U. Satyanarayana II Edition. Text Book of Biochemistry by D.M. Vasudevan and Sreekumari S. IV Edition. Textbook of Medical Biochemistry- S.K.Das Gupta. Lippincott's Illustrated Reviews Biochemistry. Harper's Illustrated Biochemistry by Murry et.al.26 Edition 		
Other References	<ol style="list-style-type: none"> Albert Lehninger, Principles of biochemistry 1993 James M Orten, Human biochemistry Lubert Strayer, Biochemistry Thomas M Devlin, Bio chemistry with clinical correalation 		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	2	3	3	2	3	3	2	3	3	2
CO201.2	3	3	2	3	3	2	3	3	2	3	3
CO201.3	3	3	3	3	2	3	3	2	3	3	2

CO201.4	3	3	3	3	3	2	3	3	2	3	3
CO201.5	3	3	3	3	3	2	3	3	2	3	3
CO201.6	3	3	3	3	3	2	3	3	2	3	3

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

School: School of Allied Health Sciences		Batch : 2020-24
Program: Bachelors of Physiotherapy		Current Academic Year: 2020-2021
Branch: Physiotherapy		Semester : I
1	Course Code	BPT 121
2	Course Title	SOCIOLOGY & PSYCHOLOGY
3	Credits	4
4	Contact Hours (L-T-P)	4-0-0
	Course Type	DSE
5	Course Objective	<ol style="list-style-type: none"> 1. The objective of the course is that after lectures, the students will be able to demonstrate an understanding of the role of socio-cultural factors as determinants of health and behaviour in health and sickness. They will be able to relate this to therapeutic situations in the practice of physiotherapy. 2. The student will be able to recognize and help with the psychological factors involved in disability, pain, disfigurement, unconscious patients, chronic illness, death, bereavement and medical surgical patients/conditions. They should also understand the elementary principles of behaviour for applying in the therapeutic environment. In addition, the students will be able to show their proficiency based on written and internal evaluation.
6	Course Outcomes	<p>CO1: Understand the role of family and community in the development of behaviours.</p> <p>CO2: Develop a holistic outlook toward the structure of society and community resources, understand the significance of social interactions in the process of rehabilitation.</p> <p>CO3: Identify the subtle influence of culture in the development of human personality, the role of beliefs and values as determinants of individual and group behaviours.</p> <p>CO4: Psychosocial assessment of patients in various developmental stages.</p> <p>CO5: Concept of stress and its relationship to health, sickness and one's profession.</p> <p>CO6: Ego defense mechanisms and learn counselling techniques to help those in need, Reasons for non-compliance among patients and improving compliance behavior</p>
7	Course Description	<p>This course is to design to develop the basic knowledge of Sociology with respect to different society and its relation towards health and Physiotherapy treatment.</p> <p>This course is also develops the basic knowledge of Psychology with respect to the normal development of a child and the Psychological condition of patient in terms of Health related Psychological introspection. This develops the utilization and importance</p>

		of Psychology with respect to Physiotherapy treatment	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	<p>Introduction:</p> <p>a. Meaning-Definition and scope of sociology</p> <p>b. Its relation to Anthropology, Psychology, Social Psychology.</p> <p>c. Methods of Sociological investigations- Case study, social survey, questionnaire, Interview and opinion poll methods.</p> <p>d. Importance of its study with special reference to Health Care Professionals.</p> <p>Social Factors in Health and disease situations:</p> <p>a. Meaning of social factors</p> <p>b. Role of social factors in health and illness</p>	CO1, CO2
	B	<p>Socialization:</p> <p>a. Meaning and nature of socialization.</p> <p>b. Primary, Secondary and Anticipatory socialization.</p> <p>c. Agencies of socialization.</p> <p>Social Groups:</p> <p>a. Concepts of social groups, influence of formal and informal groups on health and sickness. The role of primary groups and secondary groups in the hospital and rehabilitation setup.</p>	CO1, CO2
	C	<p>Family:</p> <p>a. The family, meaning and definitions.</p> <p>b. Functions of types of family</p> <p>c. Changing family patterns</p> <p>d. Influence of family on the individual health, family and nutrition, the effects of sickness in the family and psychosomatic disease and their importance to physiotherapy.</p> <p>Community:</p> <p>a. Rural community: Meaning and features-Health hazards of ruralities, health hazards to tribal community.</p> <p>b. Urban community: Meaning and features-Health hazards of urbanities.</p>	CO1, CO2
	Unit 2		
	A	<p>Culture and Health:</p> <p>a. Concept of Health</p> <p>b. Concept of Culture</p> <p>c. Culture and Health</p> <p>d. Culture and Health Disorders</p> <p>Social change:</p> <p>a. Meaning of social changes.</p> <p>b. Factors of social changes.</p> <p>c. Human adaptation and social change</p> <p>d. Social change and stress.</p> <p>e. Social change and deviance.</p> <p>f. Social change and health programme</p> <p>g. The role of social planning in the improvement of health and rehabilitation.</p>	CO1, CO3
	B	Social Problems of disabled: Consequences of the following social problems in relation to sickness and disability, remedies	CO1, CO3

	<p>to prevent these problems.</p> <ol style="list-style-type: none"> Population explosion Poverty and unemployment Beggary Juvenile delinquency Prostitution Alcoholism Problems of women in employment Geriatric problems Problems of underprivileged. 	
C	<p>Social security and social legislation in relation to the disabled.</p> <p>Social worker:</p> <ol style="list-style-type: none"> Meaning of Social Work The role of a Medical Social Worker. 	CO 1, CO 3
Unit 3		
A	<p>Introduction to Psychology</p> <ol style="list-style-type: none"> Schools: Structuralism, functionalism, behaviorism, Psychoanalysis. Methods: Introspection, observation, inventory and experimental method. Branches: pure psychology and applied psychology Psychology and physiotherapy <p>Growth and Development</p> <ol style="list-style-type: none"> Lifespan: Different stages of development (Infancy, childhood, adolescence, adulthood, middle age, old age). Heredity and environment: role of heredity and environment in physical and psychological development, “Nature v/s Nurture controversy”. 	CO4,CO5
B	<p>Sensation, attention and perception</p> <ol style="list-style-type: none"> Sensation: Vision, Hearing, Olfactory, Gustatory and Cutaneous sensation, movement, equilibrium and visceral sense. Attention: Types of attention, Determinants of attention (subjective determinants and objective determinants). Perception: Gestalt principles of organization of perception (principle of figure ground and principles of grouping), factors influencing perception (past experience and context). Illusion and hallucination: different types. 	CO4,CO5
C	<p>Motivation</p> <ol style="list-style-type: none"> Motivation cycle (need, drive, incentive, reward). Classification of motives. Abraham Maslow’s theory of need hierarchy 	CO4,CO5
Unit 4		
A	<p>Frustration and conflict</p> <ol style="list-style-type: none"> Frustration: sources of frustration. Conflict: types of conflict. Management of frustration and conflict <p>Emotions</p> <ol style="list-style-type: none"> Three levels of analysis of emotion (physiological level, subjective state, and overt behavior). Theories of emotion Stress and management of stress. 	CO4,CO5
B	Intelligence	CO4,CO5

	<p>a. Theories of intelligence. b. Distribution of intelligence. c. Assessment of intelligence</p> <p>Thinking a. Reasoning: deductive and inductive reasoning b. Problem solving: rules in problem solving (algorithm and heuristic) c. Creative thinking: steps in creative thinking, traits of creative people</p>		
C	<p>Learning a. Factors effecting learning. b. Theories of learning: trial and error learning, classical conditioning, Operant conditioning, insight learning, social learning theory. c. The effective ways to learn: Massed/Spaced, Whole/Part, Recitation/Reading, Serial/Free recall, Incidental/Intentional learning, Knowledge of results, association, organization, and mnemonic methods.</p>	CO4,CO5	
Unit 5			
A	<p>Personality a. Approaches to personality: type & trait, behavioristic, psychoanalytic and humanistic approach. b. Personality assessment: observation, situational test, questionnaire, rating scale, interview, and projective techniques. c. Defense Mechanisms: denial of reality, rationalization, projection, reaction formation, identification, repression, regression, intellectualization, undoing, introjection, acting out.</p>	CO5,CO6	
B	<p>Social psychology a. Leadership: Different types of leaders. Different theoretical approaches to leadership. b. Attitude: development of attitude. Change of attitude.</p>	CO5,CO6	
C	<p>Clinical psychology–Models of training, abnormal behavior assessment, clinical judgment, psychotherapy, self-management methods, physiotherapist patient interaction, aggression, self-imaging, stress management, assertive training, Group therapy, Body awareness, Pediatric, child and geriatric clinical psychology.</p>	CO5,CO6	
Mode of examination	Theory/Jury/Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	<ol style="list-style-type: none"> Morgan, C. T., Rosen, J. W., Morgan, C. T., & King, R. A. Study guide for Morgan and King Introduction to psychology: Baron, R.A.. Introduction to Psychology Megee-sociology'Drydonpressclilinois. Kupuswamy- Social Changes in India -Vikas Ahuja- Social problems-Bookhive Gihnsberg- Principles of sociology-sterling 		

		publications. 7. Julian- Social Problem- Prentice hall. 8. Introduction to social psychology- Akolkar- Oxford publishing house.	
	Other References	1. Psychology and sociology - Applied to Medicine - Porter & Alder - W. B.Saunders. 2. Parter & Alder': Psychology & sociology applied to medicine- W.B.Sunders.	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	2	3	3	3	3	2	3
CO2	3	3	3	3	2	3	3	3	3	2	3
CO3	3	3	3	3	2	3	3	3	3	2	3
CO4	3	3	3	3	2	3	3	3	3	2	3
CO5	3	3	3	3	2	3	3	3	3	2	3
CO6	3	3	3	3	2	3	3	3	3	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School of allied health sciences		Batch :2020-24
Program: Bachelors of Physiotherapy		Current Academic Year:2020-21
Branch: Physiotherapy		Semester: I
1	Course Code	BPT 122
2	Course Title	BASIC COMPUTER & INFORMATION ENGLISH COMMUNICATION AND SOFT SKILLS
3	Credits	3
4	Contact Hours (L-T-P)	3-0-0
	Course Type	SEC
5	Course Objective	1. The course is designed to create awareness among the students about basic operation of Computer. 2. The objectives of this course are to write grammatically correct English, to develop writing skills, to understand and express meaningfully the prescribed tent.

		3. To comprehend and communicate in simple English; grooming the personality of the students.	
6	Course Outcomes	<p>CO1: Tell about the fundamentals of computer like generations, languages, input-output devices, storage and memory and processes.</p> <p>CO2: Describe the basic use of Windows, computer applications like MS word, Excel and power points.</p> <p>CO3: describe different operating system, types and components of computer networks,</p> <p>CO4: Use the internet and application of computer in clinical settings.</p> <p>CO5: Understand about the grammatical and idiomatic usages, Gain knowledge about various methods of patient education, barriers of communication and how to overcome them.</p> <p>CO6: Become fluent in speaking and enhance the ability to communicate effectively with colleagues, doctors, patients etc. and writing various official letters, writing patients reports and summarize scientific sessions.</p>	
7	Course Description	<p>This Course describes –Basic Operation of Computer, Various Input and Output devices, Secondary Storage Devices, Detailed study of Components of CPU and Introduction to MS Word, MS Power point, MS Excel</p> <p>The course is designed to enable students to enhance ability to comprehend spoken and written English, required for effective communication in their professional work.</p>	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Introduction to computer: Introduction, characteristics of computer, block diagram of computer, generations of computer, computer languages.	CO1, CO2
	B	Input output devices: Input devices (keyboard, point and draw devices, data scanning devices, digitizer, electronic card reader, voice recognition devices, vision-input devices), output devices (monitors, pointers, plotters, screen image projector, voice response systems).	CO1, CO2
	C	Processor and memory: The Central Processing Unit (CPU), main memory. Storage Devices: Sequential and direct access devices, magnetic tape, magnetic disk, optical disk, mass storage devices.	CO1, CO2
	Unit 2		
	A	.Introduction of windows: History, features, desktop, taskbar, icons on the desktop, operation with folder, creating shortcuts, operation with windows (opening, closing, moving, resizing, minimizing and maximizing, etc.).	
	B	Introduction to MS- Word: introduction, components of a word window, creating, opening and inserting files, editing a document file, page setting and formatting the text, saving the document, spell checking, printing the document file, creating and	CO1, CO3

		editing of table, mail merge.			
C		Introduction to Excel: introduction, about worksheet, entering information, saving work books and formatting, printing the worksheet, creating graphs.			CO1, CO3
Unit 3					CO1, CO3
A		Introduction to power-point: introduction, creating and manipulating presentation, views, formatting and enhancing text, slide with graphs.			CO3,CO4
B		Introduction of Operating System: introduction, operating system concepts, types of operating system. Computer networks: introduction, types of network (LAN, MAN, WAN, Internet, Intranet), network topologies (star, ring, bus, mesh, tree, hybrid), components of network.			CO3,CO4
C		Internet and its Applications: definition, brief history, basic services (E-Mail, File Transfer Protocol, telnet, the World Wide Web (WWW)), www browsers, use of the internet. Application of Computers in clinical settings.			CO3,CO4
Unit 4					
A		Basic Language Skills: Grammar and Usage. 2. Business Communication Skills. With focus on speaking- Conversations, discussions, dialogues, short presentations, pronunciation.			CO5,CO6
B		Teaching the different methods of writing like letters, E-mails, report, case study, collecting the patient data etc. Basic compositions, journals, with a focus on paragraph form and organization.			CO5,CO6
C		Basic concepts& principles of good communication Special characteristics of health communication			CO5,CO6
Unit 5					
A		Types & process of communication–verbal, non-verbal and written communication. Upward, downward and lateral communication.			CO6,CO7
B		Therapeutic communication: empathy versus sympathy. Communication methods for teaching and learning.			CO6,CO7
C		Communication methods for patient education. Barriers of communication & how to overcome			CO6,CO7
Mode of examination		Theory/Jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE		
	30%	20%	50%		
Text book/s*		1. Introduction to Computer- Renu Kapoor. 2. English Grammar Composition & Usage by J.C. Nesfield, Macmillan Publishers 3. The Business letters by Madan Sood 4. Communication Skills by Sanjay Kumar &Pushp Lata			
Other References					

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3
CO201.6	3	3	3	3	3	3	3	3	3	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

Practical

Note: This is to be supported a **list of Practical's (As shown in template B2) in the Instructional Plan** listing the practical's which also needs to be uploaded onto LMS.

School: School Of Allied Health Sciences	Batch: 2020-24
Program: Bachelors of physiotherapy	Current Academic Year: 2020-2021
Branch: Physiotherapy	Semester: I

1	Course Code	BPT 156	
2	Course Title	HUMAN ANATOMY I (Practical)	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Status	CC	
5	Course Objective	<p>1. The student will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapy and occupational therapy.</p> <p>2. In addition the student will be able to fulfill with 75% accuracy (as measured written & oral internal evaluation) the following objectives of the course.</p>	
6	Course Outcomes	<p>CO1: To identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions.</p> <p>CO2: To understand the basic principles of embryology including genetic inheritance and stages involved in development of the organs and systems from the time of conceptions till birth.</p> <p>CO3: To understand the bones, joints, muscles, vascular and nerve supply of upper limb.</p> <p>CO4: To know about basic anatomical knowledge of boundaries and contents of thoracic cavity.</p> <p>CO5: To understand the bones, joints, muscles, vascular and nerve supply of head and neck.</p>	
7	Course Description	It is designed to provide students with the working knowledge of the structure of the human body which is essential foundation for their clinical studies.	
8	Outline syllabus		CO Mapping
	Unit 1	GENERAL ANATOMY	
		<ol style="list-style-type: none"> Brief Demonstration. Identification 	CO1, CO2
	Unit 2	UPPER EXTREMITY	
		<ol style="list-style-type: none"> Brief Surface Anatomy Demonstration & Examination 	CO1, CO3
	Unit 3	UPPER EXTREMITY JOINT	
		<ol style="list-style-type: none"> Brief Surface Anatomy 	CO2, CO4

		3. Demonstration & Examination			
Unit 4	THORAX				
	1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO1,CO4	
Unit 5	HEAD AND NECK				
	1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO4,CO5	
Mode of examination	Practical/Viva				
Weightage Distribution	CA	MTE	ETE		
	60%	0%	40%		
Text book/s*	1. B D Chaurasia's Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas-Inderbir Singh. 4. Richard S. Snell- Clinical Anatomy.				
Other References	1. Kieth L Moorie, Clinically Oriented Anatomy. 2. A K Datta, Essentials Of Human Anatomy: Thorax And Abdomen 3. Inderbir Singh, Human Osteology.				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	2	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	2	3	3	3	3	3
CO201.5	3	3	3	3	3	2	3	3	3	3	3

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelors Of Physiotherapy (BPT)		Current Academic Year: 2020-2021
Branch: Physiotherapy		Semester: I
1	Course Code	BPT 157
2	Course Title	HUMAN PHYSIOLOGY I (PRACTICAL)

3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	PRACTICAL	
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to demonstrate an understanding of elementary human physiology	
6	Course Outcomes	<p>CO1: Understand the cell physiology in detail including the transport mechanism of human body and blood and body fluid distribution and composition.</p> <p>CO2: Understand interaction and integration of different organ systems in health and diseases special nerve-muscle physiology.</p> <p>CO3: Understand the functional mechanisms of cardiovascular system, student should be able to tell about the conducting system of heart, cardiac muscle, cardiac output along with the calculation and handling of equipment e.g. measurement of blood pressure</p> <p>CO4: Describe the physiology of respiratory system which include mechanics of breathing, spirometry, transport of gases and the common disorders of respiratory system.</p> <p>CO5: Demonstrate in depth knowledge of digestive and endocrine system.</p>	
7	Course Description	The course is designed to assist the students to acquire knowledge of the normal human Physiology of various body systems and understand the alternation in physiology in disease and practice of Physiotherapy as applicable for each systemic disorder	
8	Outline syllabus	CO Mapping	
	Unit 1		
		<ol style="list-style-type: none"> 1. Demonstration of Microscope 2. Demonstration of Haemoglobin estimation 3. Experimentation 	CO1,CO3
	Unit 2		
		<ol style="list-style-type: none"> 1. Total Red Blood Cell Count 2. Total Leucocyte Count. 3. Experimentation 	CO1,C03
	Unit 3		

		<ol style="list-style-type: none"> 1. BT, CT, Blood Group. 2. Estimation and Demonstration of ESR 3. Estimation and Demonstration of PCV. 	CO2,C03
	Unit 4		
		<ol style="list-style-type: none"> 1. Demonstration of SMT 2. Effect of temperature on SMT 3. Effect of two successive stimuli on skeletal muscle contraction & Genesis of fatigue in skeletal muscle. 	CO4,CO5
	Unit 5		
		<ol style="list-style-type: none"> 1. Effect of increasing strength of stimuli 2. Effect of increasing frequency 3. Effect of load on skeletal muscle contraction and determination of conduction velocity of sciatic nerve. 	CO3,CO5

Mode of examination	Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	60%	0%	40%	

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3

SECOND SEMESTER

School: School Of Allied Health Sciences	Batch :2020-24
Program: Bachelors of physiotherapy	Current Academic Year:2020-21

Branch: Physiotherapy		Semester: II	
1	Course Code	BPT 113	
2	Course Title	HUMAN ANATOMY II	
3	Credits	6	
4	Contact Hours (L-T-P)	5-1-0	
	Course Type	Compulsory	
5	Course Objective	<p>It is designed to provide students with the working knowledge of the structure of the human body which is essential foundation for their clinical studies. Studies are concerned with the topographical and functional anatomy of the limbs and thorax. Particular attention is paid to the muscles, bones and joints of the regions.</p> <p>The abdomen, pelvis, perineum, head and neck and central nervous system (CNS) are studied with particular reference to topics of importance to physiotherapists. The study of the CNS includes detailed consideration of the control of motor function.</p>	
6	Course Outcomes	<p>CO1: Identify the axis and planes of different movements in human body and should be able to tell common anatomical terminology.</p> <p>CO2: Identify the structures and classification of various connective tissues, bones, joints and muscles in the human body and correlate the structure with the functions.</p> <p>CO3: Discuss about the structural and functional importance of muscles, joints, long and short nerves and different spaces in upper limb and lower limb, trunk and pelvis including applied aspect.</p> <p>CO4: Gain knowledge of greater vessels, muscles and structural and functional importance of different viscera</p> <p>CO5: Identify and describe various parts of nervous system</p>	
7	Course Description	<p>The study of anatomy will include identification of all gross anatomical structures. Particularly emphasis will be placed on description of bones, joints, muscles, the brain, cardio pulmonary and nervous system, as these are related to the application of physiotherapy and occupational therapy in patients.</p>	
8	Outline syllabus		CO Mapping
	Unit 1	Neuro Anatomy	
	A	Organization of Central Nervous system - Spinal nerves and autonomic nervous system, Cranial nerves, Peripheral nervous system, Peripheral nerve	CO1, CO5
	B	Neuromuscular junction, Sensory end organs, Central Nervous System, Spinal segments and areas, Brain Stem, Cerebellum, Inferior colliculi, Superior Colliculi, Thalamus, Hypothalamus, Corpus striatum, Cerebral hemisphere, ventricle system, meninges	CO1, CO5,
	C	Blood supply to brain, Basal Ganglia, the pyramidal system, Pons, medulla, extra pyramidal systems.	CO1, CO5

Unit 2	Abdomen			
A	I. Peritoneum: Parietal peritoneum, visceral peritoneum, folds of peritoneum, functions of peritoneum.			CO1,C O3
B	Large blood vessels of the gut.			CO1, CO3
C	Location, size, shape, features, blood supply, nerves supply and functions of the following: Stomach, liver, spleen, pancreas, kidney, urinary bladder, intestines, gall bladder. Anterior abdominal wall and posterior abdominal wall.			CO1, CO3
Unit 3	Pelvis			
A	Position, shape, size, features, blood supply of the male reproductive system.			CO1,C O3
B	Position, shape, size, features, blood supply of the female reproductive system.			CO1,C O3
C	Nerve supply of the male and female reproductive system.			CO1,C O3
Unit 4	Lower Extremity			
A	Osteology: Hip bone, femur, tibia, fibula, patella, tarsals, metatarsals and phalanges.			CO3, CO4
B	Soft parts: Gluteal region, front and back of the thigh (Femoral triangle, femoral canal And inguinal canal), medial side of the thigh (Adductor canal) lateral side of the thigh, popliteal fossa, anterior and posterior compartment of leg, sole of the foot.			CO3, CO4,
C	Lymphatic drainage of lower limb, venous drainage of the lower limb, arterial supply of the lower limb, arches of foot, skin of foot.			CO3,C O4
Unit 5	Joints of Lower Extremity			
A	Hip Joint			CO2,C O3
B	Knee joint			CO2, CO3
C	Ankle joint, joints of the foot.			CO2, CO3
Mode of examination	Theory/jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	30%	20%	50%	
Text book/s*	<ol style="list-style-type: none"> 1. B D Chaurasia's Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas-Inderbir Singh. 4. Richard S. Snell- Clinical Anatomy. 			
Other references	<ol style="list-style-type: none"> 1. Kieth L Moorie, Clinically Oriented Anatomy. 2. A K Datta, Essentials Of Human Anatomy: Thorax And Abdomen 3. Inderbir Singh, Human Osteology. 			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3

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

School: School Of Allied Health Sciences		Batch :2020-24
Program: Bachelors of physiotherapy		Current Academic Year:2020-21
Branch: Physiotherapy		Semester: II
1	Course Code	BPT 114
2	Course Title	HUMAN PHYSIOLOGY II
3	Credits	6
4	Contact Hours (L-T-P)	5-1-0
	Course Type	Compulsory
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to demonstrate an understanding of elementary human physiology
6	Course Outcomes	CO1: demonstrate abrief knowledge of pathway of vision, auditor and taste, smell and balance along with their disorders. CO2: Understand the function of Peripheral and central nervous system and their function. They should be able to tell different pathways present in central nervous system with their location function and lesion including Upper and Lower motor neuron lesion. CO3: understand the physiology of excretory and reproductive system. CO4: To understand the influence of various environmental factors including personal stressors like exercise on the organ systems
7	Course Description	The course is designed to assist the students to acquire knowledge of the normal human Physiology of various body systems and understand the alternation in physiology in disease and practice of Physiotherapy as applicable for each systemic disorder

8	Outline syllabus		CO Mapping
	Unit 1	The Excretory System	
	A	Physiological anatomy of kidney & mechanism of formation of Urine.	CO1, CO5
	B	Mechanism of concentration and dilution of urine, The Counter Current System, Acidification of Urine.	CO1, CO5,
	C	Physiology of micturition and regulation of body temperature in humans.	CO1,C O5
	Unit 2	Endocrine System	
	A	General principles of endocrinology, pituitary gland. Thyroid Gland, Adrenal Cortex & Pancreas.	CO1,C O3
	B	, Parathyroid , Calcitonin and Vitamin D.	CO1, CO3
	C	Adrenal medulla, Thymus & the pineal Gland.	CO1, CO3
	Unit 3	Reproductive System	
	A	Puberty, classification and functions of male and Female sex hormones, The Male reproductive system .	CO1,C O3
	B	The Female Reproductive System-- female sexual cycle , ovulation and contraception.	CO1,C O3
	C	Physiological changes during pregnancy, child birth, functions of placenta and physiology of lactation.	CO1,C O3
	Unit 4	The Nervous System	
	A	Organization of Nervous system, Synapse , Physiology of receptor organs for special and general sensation, physiology of touch, pain and temperature sensation, physiology of reflex action, classification and properties of reflexes.	CO3, CO4
	B	Sensory and motor tracts of spinal cord and effects of complete and incomplete transaction of spinal cord at various levels. Cerebral Cortex— characteristics , areas and functions, cerebellum and Basal ganglia—upper and lower motor lesions, structure functions and connections. .Hypothalamus & its functions	CO3, CO4,
	C	Regulation of equilibrium and posture, Learning, Memory, Speech and it's disorders, Cerebrospinal Fluid and Blood Brain Barrier ,ANS	CO3,C O4
	Unit 5	Special Senses	
	A	General outline of Image formation and visual perception, papillary and conjunctival reflexes. General outline of mechanism of hearing and perception of sound.	CO2,C O3
	B	Errors of refraction & their correction. colourblindness.Test of hearing &types of deafness	CO2, CO3
	C	Taste and Olfaction.	CO2, CO3
	Mode of examination	Theory/jury/Practical/Viva	

Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Sembulingum, K., Essentials of Medical Physiology 2. Dr. S.C. Choudhary, Concise medical physiology 3. Dr. C.C. Chatterjee., Human physiology 4. Ganong, Review of Medical Physiology 5. Samson Wright's Applied Physiology 6. Guyon & Halls, Medical Physiology		
Other references	1. Sam san writes applied physiology handbook -by Cyril a keeleericB.Neil 2. Best and Taylor's physiological basic of Medical practice- C.H. Best aetal 3. Medical physiology Dr. A.C. Gutton. Review of Medical Physiology William FooGanong		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3

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

School: School Of Allied Health Sciences	Batch: 2020-24
Program: Bachelors of physiotherapy	Current Academic Year:2020-21
Branch: Physiotherapy	Semester: II
1 Course Code	BPT 123
2 Course Title	BASIC PRINCIPLES OF BIOMECHANICS
3 Credits	6
4 Contact Hours (L-T-P)	5-1-0
Course Type	Compulsory
5 Course Objective	On successful completion of this programme, students should be able to describe the understanding of basics of mechanics, muscle structure and contraction, factors effecting muscle contraction and recruitment , explain mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities, understand normal mechanics and patho mechanics of TMJ associated with various conditions, analyse normal mechanics of posture and gait in various planes and axis and patho mechanics associated with abnormal posture and gait.

6	Course Outcomes	CO1: The Basics of mechanics of force system, equilibrium, lever and pulley. CO2: Describe the joint structure, classification and function of joints And biomechanics of Connective tissue CO3: Describe the muscle structure and function of muscles, types of muscles, contractions and factors effecting muscle recruitment and function CO4: Describe the biomechanics of the thoracic and chest wall and patho biomechanics associated with chest deformities CO5: Describe the temporo mandibular joint structure, function and dysfunction CO6: Describe the analysis of posture and gait during static and dynamic movement, relation with LOG, pathomechanics of abnormal gait and posture	
7	Course Description	This Course Supplements the Knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics and their application in musculoskeletal and various other dysfunctions	
8	Outline syllabus		CO Mapping
	Unit 1	Basic Concepts in Biomechanics: Kinematics and Kinetics	
	A	Types of Motion Location of Motion Direction of Motion Magnitude of Motion Definition of Forces	CO1, CO6
	B	Force of Gravity Reaction forces Equilibrium Objects in Motion Force of friction	CO1, CO6,
	C	Concurrent force systems Parallel force system Work Moment arm of force Force components Equilibrium of levers	CO1, CO6
	Unit 2	Joint structure and Function	
	A	Joint design Materials used in human joints	CO2, CO3
	B	General properties of connective tissues Human joint design	CO2, CO3
	C	Joint function Joint motion General effects of disease, injury and immobilization.	CO2, CO3
	Unit 3	Muscle structure and function	
	A	Mobility and stability functions of muscles	CO2, CO3
	B	Elements of muscle structure	CO2, CO3

		Muscle function	O3
C		Effects of immobilization, injury and aging	CO2,C O3
Unit 4		Biomechanics of the Thorax and Chest wall	
A		General structure and function	CO2, CO4
B		Rib cage and the muscles associated with the rib cage Ventilatory motions: its coordination and integration	CO3, CO4,
C		Developmental aspects of structure and function Changes in normal structure and function in relation to pregnancy, scoliosis and COPD	CO2,C O4
Unit 5		The Temporomandibular Joint-	
A		General features	CO2,C O5
B		Structure	CO2, CO5
C		Function and dysfunction	CO2, CO5
Mode of examination	Theory/jury/Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Biomechanical principles: Frenkel 2. Joint Structure & Functions : Norkins 3. Biomechanics- Nordin		
Other references	1. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann. 2. Kinesiology: Applied to Pathological Motion - Soderberg Lippincott 3. Therapeutic Exercise by Carolyn Kisner, F. A. Davis.		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

Practical

Note: This is to be supported a **list of Practical's (As shown in template B2) in the Instructional Plan** listing the practical's which also needs to be uploaded onto LMS.

School: School Of Allied Health Sciences	Batch: 2020-24
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Program: Bachelors of physiotherapy		Current Academic Year:2020-2021	
Branch: Physiotherapy		Semester: II	
1	Course Code	BPT 153	
2	Course Title	HUMAN ANATOMY II (PRACTICAL)	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Type	Compulsory	
5	Course Objective	<p>It is designed to provide students with the working knowledge of the structure of the human body which is essential foundation for their clinical studies. Studies are concerned with the topographical and functional anatomy of the limbs and thorax. Particular attention is paid to the muscles, bones and joints of the regions.</p> <p>The abdomen, pelvis, perineum, head and neck and central nervous system (CNS) are studied with particular reference to topics of importance to physiotherapists. The study of the CNS includes detailed consideration of the control of motor function.</p>	
6	Course Outcomes	<p>CO1: Identify the axis and planes of different movements in human body and should be able to tell common anatomical terminology.</p> <p>CO2: Identify the structures and classification of various connective tissues, bones, joints and muscles in the human body and correlate the structure with the functions.</p> <p>CO3: Discuss about the structural and functional importance of muscles, joints, long and short nerves and different spaces in upper limb and lower limb, trunk and pelvis including applied aspect.</p> <p>CO4: Gain knowledge of greater vessels, muscles and structural and functional importance of different viscera</p> <p>CO5: Identify and describe various parts of nervous system</p>	
7	Course Description	<p>The study of anatomy will include identification of all gross anatomical structures. Particularly emphasis will be placed on description of bones, joints, muscles, the brain, cardio pulmonary and nervous system, as these are related to the application of physiotherapy and occupational therapy in patients.</p>	
8	Outline syllabus		CO Mapping
	Unit 1	Neuro Anatomy	
		<ol style="list-style-type: none"> 1. Brief 2. Surface Anatomy 3. Demonstration & Examination 	CO1, CO5
	Unit 2	Abdomen	
		<ol style="list-style-type: none"> 1. Brief 2. Surface Anatomy 3. Demonstration & Examination 	CO1, CO3

Unit 3	Pelvis			
	1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO1,C O3
Unit 4	Lower Extremity			
	1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO3,C O4
Unit 5	Joints of Lower Extremity			
	1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO2, CO3
Mode of examination	Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	60%	0%	40%	
Text book/s*	1. B D Chaurasia's Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas-Inderbir Singh. 4. Richard S. Snell- Clinical Anatomy.			
Other references	1. Kieth L Moorie, Clinically Oriented Anatomy. 2. A K Datta, Essentials Of Human Anatomy: Thorax And Abdomen 3. Inderbir Singh, Human Osteology.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3

Practical

Note: This is to be supported a list of Practical's (As shown in template B2) in the Instructional Plan listing the practical's which also needs to be uploaded onto LMS.

School: School Of Batch: 2020-24

Allied Health Sciences

Program: Bachelors Current Academic Year: 2020-2021

of physiotherapy

Branch:Physiotherapy Semester: II

1	Course Code	BPT 154
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2	Course Title	HUMAN PHYSIOLOGY II (PRACTICAL)	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Type	Compulsory	
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to demonstrate an understanding of elementary human physiology	
6	Course Outcomes	<p>CO1: demonstrate abrief knowledge of pathway of vision, auditor and taste, smell and balance along with their disorders.</p> <p>CO2: Understand the function of Peripheral and central nervous system and their function. They should be able to tell different pathways present in central nervous system with their location function and lesion including Upper and Lower motor neuron lesion.</p> <p>CO3: understand the physiology of excretory and reproductive system.</p> <p>CO4: To understand the influence of various environmental factors including personal stressors like exercise on the organ systems</p>	
7	Course Description	The course is designed to assist the students to acquire knowledge of the normal human Physiology of various body systems and understand the alternation in physiology in disease and practice of Physiotherapy as applicable for each systemic disorder	
8	Outline syllabus		CO Mapping
	Unit 1		
		<ol style="list-style-type: none"> Differential Leucocyte Count. Demonstration Experimentation 	CO1,C05
	Unit 2		
		<ol style="list-style-type: none"> Arterial Blood Pressure and radial pulse. Effect of Exercise on B.P. Effect of Posture on B.P. 	CO1,C03
	Unit 3		
		<ol style="list-style-type: none"> General Clinical Examination Clinical Examination of CVS Clinical Examination of Respiratory System 	CO1,C03
	Unit 4		
		<ol style="list-style-type: none"> Clinical Examination of Cranial nerves Clinical Examination of Sensory system Clinical Examination of Motor system. 	CO3,CO4
	Unit 5		

		1. Demonstration of normal frog cardiogram 2. Effect of temperature on it. 3. Demonstration	CO2,C O3
Mode of examination	Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	60%	0%	40%
Text book/s*	1. Sembulingum, K., Essentials of Medical Physiology 2. Dr. S.C. Choudhary, Concise medical physiology 3. Dr. C.C. Chatterjee., Human physiology 4. Ganong, Review of Medical Physiology 5. Samson Wright's Applied Physiology 6. Guyon & Halls, Medical Physiology		
Other references	1. Sam san writes applied physiology handbook -by Cyril a keeleericB.Neil 2. Best and Taylor's physiological basic of Medical practice- C.H. Best aetal 3. Medical physiology Dr. A.C. Gutton. Review of Medical Physiology William FooGanong		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3

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

School: School Of Allied Health Sciences	Batch: 2020-24
Program: Bachelors of physiotherapy	Current Academic Year: 2020-2021
Branch: Physiotherapy	Semester: II
1 Course Code	BPT 159
2 Course Title	BASIC PRINCIPLES OF BIOMECHANICS (PRACTICAL)
3 Credits	1

4	Contact Hours (L-T-P)	0-0-3	
	Course Type	Compulsory	
5	Course Objective	On successful completion of this programme, students should be able to describe the understanding of basics of mechanics, muscle structure and contraction, factors effecting muscle contraction and recruitment , explain mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities, understand normal mechanics and patho mechanics of TMJ associated with various conditions, analyse normal mechanics of posture and gait in various planes and axis and patho mechanics associated with abnormal posture and gait.	
6	Course Outcomes	CO1: The Basics of mechanics of force system, equilibrium, lever and pulley. CO2: Describe the joint structure, classification and function of joints And biomechanics of Connective tissue CO3: Describe the muscle structure and function of muscles, types of muscles, contractions and factors effecting muscle recruitment and function CO4: Describe the biomechanics of the thoracic and chest wall and patho biomechanics associated with chest deformities CO5: Describe the temporo mandibular joint structure, function and dysfunction CO6: Describe the analysis of posture and gait during static and dynamic movement, relation with LOG, pathomechanics of abnormal gait and posture	
7	Course Description	This Course Supplements the Knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics and their application in musculoskeletal and various other dysfunctions	
8	Outline syllabus		CO Mapping
	Unit 1	Basic Concepts in Biomechanics: Kinematics and Kinetics	
		1. Brief 2. Demonstration 3. Examination	CO1, CO6
	Unit 2	Joint structure and Function	
		1. Brief 2. Demonstration 3. Examination	CO2,C03
	Unit 3	Muscle structure and function	
		1. Brief 2. Demonstration 3. Examination	CO2,C03
	Unit 4	Biomechanics of the Thorax and Chest wall	
		1. Brief	CO2,

		2. Demonstration 3. Examination	CO4
Unit 5	The Temporomandibular Joint-		
A	1. Brief 2. Demonstration 3. Examination		CO2,C O5
Mode of examination	Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	60%	0%	40%
Text book/s*	1. Biomechanical principles: Frenkel 2. Joint Structure & Functions : Norkins 3. Biomechanics- Nordin		
Other references	1. Basic Biomechanics Explained - Low & Reed - Butterworth Heinmann. 2. Kinesiology: Applied to Pathological Motion - Soderberg Lippincott 3. Therapeutic Exercise by Carolyn Kisner, F. A. Davis.		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

THIRD SEMESTER

School: SAHS	Batch : 2020-24
Program: BPT	Current Academic Year: 2021-22
Branch:SA HS	Semester:3rd

1	Course Code	BPT216
2	Course Title	PATHOLOGY&MICROBIOLOGY
3	Credits	6
4	Contact Hours (L-T-P)	6-0-0
	Course Type	Compulsory
5	Course Objective	<p>1.The student will be able to understand the concepts of cell injury and changes in relation towards the pathological effects of infectious and non infectious diseases & understand the disease process , the clinical significance (with special emphasis on neuro-musculoskeletal and cardio-respiratory system)</p> <p>2. Understand the importance of microbiology, the basic concepts of microbiology, the importance of sterilization & the nosocomial infection and its prevention in the relative field.</p>
6	Course Outcomes	<p>At the end of the course, the student will be able to</p> <p>CO1: Acquire the knowledge of concepts of cell injury and changes Produced thereby indifferent tissues and organs; Capacity of the body in healing Process.</p> <p>CO2: Recall the Etio-pathological effects and the Clinico pathological Correlation of common infection. They can also understand the importance and procedure of sterilization for hospitals, lab, ICU, OT and during surgery, to manage biomedical waste products and to understand the nosocomial infection and their prevention and non infectious diseases.</p> <p>CO3: Acquire the knowledge of concepts of Neoplasia with reference to the Etiology, gross and microscopic features diagnosis and prognosis in different tissues and organs of the body. They are able to characterize, understand the pathogenicity of disease.</p> <p>CO4: Correlate normal and altered .morphology of different organ systems in different diseases needed for understanding disease process and their clinical significance (with special emphasis on neuro-musculoskeletal and cardio-respiratory system). They can understand the epidemiology of disease, diagnosis, treatment and prevention of disease</p> <p>CO5: Acquire knowledge of common immunological disorders and their resultant effects on the human body. They will be able to perform, demonstrate, implement and apply the concept of microbiology in better understanding with relevance to human disease.</p>

		CO6: Understand in brief, about the Hematological diseases and their resultant effects on the human body.
7	Course Description	The course is designed to develop the basic knowledge about the concept of injury , its healing process and its resultant effects on the human body. Microbiology involves the study of common organisms causing diseases including nosocomial infections and precautionary measures to protect one from acquiring infections. The knowledge and understanding Microbiology of diseases is essential to institute appropriate treatment or suggest preventive measures to the patient. Particular effort is made in this course to avoid burdening the student.
8	Outline syllabus	CO Mapping
	Unit 1	General Pathology
	A	1)Cell injury- causes, mechanisms with special reference Physical, Chemical and toxic injury and ionizing radiation. Reversible cell injury& (degenerations)-types, morphology cellular swelling, fatty change. Intracellular accumulations -hyaline change and mucoid, change. 2) Irreversible cell injury, types of necrosis, apoptosis, Gangrene: types and etiopathogenesis, Pathological calcification-dystrophic and metastasis, pathogenesis and morphology 3) Extra- cellular accumulation-amyloidosis, Pigments and pigmentations
	B	Inflammation and repair 1)Acute inflammations features; causes, vascular & cellular events, morphologic Variations 2) Inflammatory cell & mediators, Chronic inflammation:- causes, types, non-specific & granulomatous with examples 3) Wound healing by primary & secondary intention factors promoting & delaying healing process, healing at various sites including bones, nerve & muscle. Regeneration & repair.
	C	Fungal disease and opportunistic infections.Parasitic diseases: Malaria,Filaria, Amoebiasis, Kala-azar, Cysticercosis, Hydatid cyst.
	Unit 2	
	A	Hyperemia /Ischemia and Haemorrhage Edema: Pathogenesis and types .Chronic venous congestion: Lung ,Liver, Spleen, Systemic Pathology Thrombosis and Embolism: Formation, Fate and

	<p>Effects. Infarction: Types, Common sites Shock: Pathogenesis, types, morphologic changes.</p>	
B	<p>Growth Disturbances: 1) Atrophy, Hypertrophy, Hyperplasia, Aplasia, Hypoplasia, Metaplasia, Malformation, agenesis, dysplasia. Precancerous lesions. Neoplasia: 1) Neoplasia: Definition, classification, Biological behaviour: Benign and Malignant, Carcinoma and Sarcoma. Malignant Neoplasia: Grades and Stages, Local & Distant spread. Carcinogenesis: Environmental carcinogens, chemical, viral, occupational. Heredity and cellular oncogenes and prevention of cancer. Benign & Malignant epithelial tumours Eg. Squamous papilloma, Squamous cell carcinoma, Malignant melanoma. Benign & Malignant mesenchymal tumours Eg: Fibroma, Lipoma, Neurofibroma, Fibrosarcoma, Liposarcoma, Rhabdo-myosarcoma, Teratoma.</p>	
C	<p>Genetic disorders: 1) Genetic Disorders – Basic concepts of genetic disorders and some common examples and congenital malformation. Hematology: 1) Nutritional anemias, Acquired hemolytic anaemias, Hemostatic disorders, Vascular and Platelet disorders & lab diagnosis. Coagulopathies, Leukocytic disorders, Leukemia, Blood transfusion</p>	CO3, CO6
Unit 3	Lymphatic system	
A	<p>1) Diseases of the gall bladder- cholecystitis, cholelithiasis, carcinoma, lymphadenitis-nonspecific and granulomatous. Causes of lymph node enlargements. Reactive Hyperplasia, Primary Tumours-Hodgkin & Non-Hodgkin & Lymphomas, Metastatic Tumours, Causes of Splenic Enlargements. 2) Inflammations and Infections: TB Meningitis, Pyogenic Meningitis, viral meningitis and Brain Abscess, Tuberculosis, Cysticercosis Neuropathology: 1) CNS Tumors, Astrocytoma, Neuroblastoma, Meningioma, Medulloblastoma</p>	CO3, CO6
B	<p>Introduction of Microbiology: 1) Medical terminologies, Importance and applications of medical microbiology 2) Sterilization 3) Antiseptic and disinfection</p>	CO1, CO2

C	Introduction to Immunology 7 Immune system 1) Organ and cells involved in immune response 2) Antigen 3) Immunoglobulins (antibody) 4) Antigen – antibody reaction 5) Innate and acquired immunity 6) Hypersensitivity 7) Immunity (vaccines)	CO1, CO3
Unit 4		
A	1)General classification of microorganisms & characteristics Bacteriology: 2)Classification of bacteria & characteristics,morphology & anatomy 3)physiology:nutrient,microbial growth & factors associated with growth 4)Culture medis &identification	CO3
B	Systemic bacteriology: Introduction, general features, pathogenicity, diagnosis, treatment and prevention 1) Mycobacterium tuberculosis, Mycobacterium leprae 2) Chlamydia trachomatis	CO3, CO5
C	3)Diarrhoea: Salmonella, Shigella, Vibrio 4)Food poisoning: Clostridium5) Spirochaetes (Syphilis and Leptospirosis)	
Unit 5		
Parasitology, Virology and Mycology: Introduction, general features, pathogenicity, diagnosis, treatment and prevention		
A	Parasitology 1. Plasmodium 2. Amoebiasis: Entamoebahistolytica 3. Filaria Virology: 1. Polio virus 2. Orthomyxovirus 3. Paramyxovirus 4. Hepatitis 5. Herpesvirus 6. HIV	CO3, CO5
B	Mycology: 1. Subcutaneous Mycoses 2. Superficial mycosis 3. Opportunistic Mycoses	
C	Applied Microbiology 1)Hospital acquired infection 2)Biomedical waste management	CO2, CO3

		3)Central nervous System infections 4)Meningitis			
Mode of examination	Theory/Jury/Practical/Viva				
Weightage Distribution	CA	MTE	ETE		
	30%	20%	50%		
Text book/s*	1. Text book of pathology by Harsh Mohan 2. Basic pathology by cotran Kumar Robbins 1.Text books of Microbiology– R.Ananthnarayan & C.K.JayramPanikar 2. Textbook of Microbiology-C.P.Baweja, Arya publications 3. Essential of Medical Microbiology – Apurba S Sastry&SandhyaBhat, JAYPEE publication				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	3	3	3	3	2	2	3	2	3	2
CO2	2	3	2	2	2	2	2	3	3	2	3	3
CO4	2	2	2	2	3	3	3	2	2	3	2	2
CO5	3	2	3	3	2	2	2	2	2	3	3	2
CO6	2	2	3	2	2	3	3	3	2	2	2	3

Template 2

School: SAHS	Batch : 2020-24
Program: BPT	Current Academic Year: 2021-22
Branch :	Semester:3RD
1 Course Code	BPT217
2 Course Title	Pharmacology
3 Credits	4
4 Contact	4-0-0

	Hours (L-T-P)	
	Course Type	Compulsory
5	Course Objective	1.Introduce the students to basic pharmacology of various common medication used and its effects on patients in physical therapy 2.Treatment of ailment of cardiovascular system ,GOT,endocrine system,by drugs 3.To make student understand the drug and physiotherapy contribution in the outcome of the treatment.
6	Course Outcomes	CO1: 1. To understand the various routes of drugs administration, pharmacodynamics and pharmacokinetics of drugs. CO2: . To understand the various drugs used for the treatment of ANS, PNS and CNS conditions with their mechanism of action and adverse effects. CO3: To understand the various drugs used for the treatment of endocrine system with their mechanism of action and adverse effects. CO4: To understand the various drugs used for the treatment of GIT problems with their mechanism of action and adverse effects CO5: To understand the various antibiotic drugs with their mechanism of action and adverse effects CO6: To understand the various drugs used for the treatment of ailment of cardio vascular system ,bronchial asthma,skin lesions with their mechanism of action and adverse effects.
7	Course Description	This course introduces the student to basic pharmacology of common drugs used, their importance in the overall treatment including Physiotherapy. The student after completing the course will be able to understand the general principles of drug action and the handling of drugs by the body. The student will be aware of the contribution of both drug and physiotherapy factors in the outcome of treatment.
8	Outline syllabus	CO Mapping
	Unit 1	General Pharmacology–
	A	Introduction, Definitions, Classification of drugs, Sources of drugs
	B	Routes of drug administration,Distribution of drugs,Metabolism and Excretion of drugs
	C	Pharmacokinetics, Pharmacodynamics, Factors modifying drug response, Adverse effects
	Unit 2	AutonomicNervous system&Cardiovascular Pharmacology–
		CO1, CO2,

		CO3
A	General considerations-The Sympathetic and Parasympathetic Systems, Receptors, Somatic Nervous System Cholinergic and Anti-Cholinergic drugs, Adrenergic and Adrenergic blocking drugs, Peripheral muscle relaxants.	
B	Antiarrhythmic Drugs-Drugs used in the treatment of vascular disease and tissue ischemia	
C	Drugs used in the treatment of heart failure : Digitalis , Diuretics, Vasodilators, ACE inhibitors. Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors, Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators	
Unit 3	Neuropharmacology & Disorders of Movement	CO1, CO3, CO5
A	Sedative-Hypnotic Drugs: Barbiturates, Benzodiazepines Antianxiety Drugs: Benzodiazepines, Other Anxiolytics Drugs Used in Treatment of Mood Disorders: Monoamine Oxidase Inhibitors, Tricyclic	
B	Antidepressants, Atypical Antidepressants, Lithium d. Antipsychotic drugs	
C	Drugs used in Treatment of Parkinson's disease Antiepileptic Drugs, Spasticity and Skeletal Muscle Relaxants	
Unit 4	Inflammatory/Immune Diseases	
A	Non-narcotic Analgesics and Nonsteroidal Anti-Inflammatory Drugs: Acetaminophen, NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interact with NSAIDs	
B	Glucocorticoids: Pharmacological Uses of Glucocorticoids, adverse effects, Physiologic Use of Glucocorticoids	
C	Drugs Used in Treatment of Arthritic Diseases: Rheumatoid Arthritis, Osteoarthritis, Gout, Myasthenia gravis, Idiopathic Inflammatory Myopathies, systemic lupus Erythematosus, Scleroderma, Demyelinating Disease Respiratory Pharmacology: Obstructive Airway Diseases, Drugs used in Treatment of Obstructive airway Diseases, Allergic Rhinitis.	CO1, CO5
Unit 5	Digestion and Metabolism & Geriatrics-	
A	Gastrointestinal Pharmacology: Peptic Ulcer Disease, Constipation, Diarrhoea	CO1, CO5
B	Drugs Used in Treatment of Diabetes Mellitus: Insulin, Oral Hypoglycemic	
C	Pharmacology and the geriatric Population: Adverse effects of special concern in the Elderly, Dementia, Postural hypotension	
Mode of examination	Theory/Jury/Practical/Viva	

on			
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Essentials of pharmacology by KD Tripathi 2. Pharmacology by Bhattacharya Sen ray choice editor P.K. Das 3. Clinical Pharmacology by Sennet.		

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
CO. 1	2	2	3	2	2	2	2	3	2	3	3	3	2	2	3	2
CO. 2	3	2	2	2	3	3	2	2	2	3	2	2	2	2	3	2
CO. 3	3	2	3	2	2	2	2	2	2	3	2	3	2	2	2	2
CO. 4	2	2	2	2	3	3	2	3	2	2	2	2	2	2	2	2
CO. 5	3	2	3	3	2	2	3	2	2	2	2	2	2	2	3	2

Template 4

School: SAHS	Batch : 2020-24
Program: BPT	Current Academic Year: 2021-22
Branch: S AHS	Semester:3rd
1 Course Code	BPT209
2 Course Title	Biomechanics & Kinesiology
3 Credits	5
4 Contact Hours (L-T-P)	4-1-0
Course Type	Compulsory
5 Course Objective	1. Describe the joint structure, classification and function of joints And biomechanics of Connective tissue 2. Describe the muscle structure and function of muscles, types of muscles, contractions and factors effecting muscle recruitment and function

		<p>3. Describe the biomechanics of the thoracic and chest wall and patho biomechanics associated with chest deformities</p> <p>4. Describe the analysis of posture and gait during static and dynamic movement, relation with LOG, Pathomechanics of abnormal gait and posture.</p>	
6	Course Outcomes	<p>CO1: On successful completion of this programme, students should be able to describe the understanding of basics of mechanics, muscle structure and contraction, factors effecting muscle contraction and recruitment</p> <p>CO2: Describe mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities</p> <p>CO3: Define normal mechanics and patho mechanics of TMJ associated with various conditions</p> <p>CO4: Analyse normal mechanics of posture and gait in various planes and axis</p> <p>CO5: Analyse the patho mechanics associated with abnormal posture and gait.</p> <p>CO6: Describe biomechanics of shoulder, elbow, wrist, hip, knee, ankle joint, Vertebral column.</p>	
7	Course Description	This Course Supplements the Knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics and their application in musculoskeletal and various other dysfunctions.	
8	Outline syllabus		CO Mapping
	Unit 1	Biomechanics of the vertebral column	
	A	General structure and function	CO1, CO6
	B	Regional structure and function–Cervical region, thoracic region, lumbar region, sacral region	
	C	Muscles of the vertebral column & General effects of injury and aging	
	Unit 2	Biomechanics of the Upper Limb	Co1, CO6
	A	The shoulder complex: Structure and their integrated function & the effects of immobilization and injury.	
	B	The elbow complex: Structure and function of the elbow joint	
	C	The wrist and hand complex: Structural components and functions of the wrist complex; structure of the hand complex; functional position of the wrist and hand	
	Unit 3	Biomechanics of the Lower Limb	CO1, CO6
	A	The hip complex: structure and function of the hip joint; hip joint pathology–arthrosis, fracture,	

	bony abnormalities of the femur			
B	The knee complex: structure and function of the knee joint–tibiofemoral joint and Patellofemoral joint; effects of injury and disease			
C	The ankle and foot complex.: structure and function of the ankle joint, subtalar joint, talocalcaneonavicular joint, transversetarsal joint, tarsometatarsal joints, metatarsophalangeal joints, interphalangeal joints, structure and function of the plantar arches, muscles of the ankle and foot, deviations from normal structure and function– Pes Planus and Pes Cavus			
Unit 4	Analysis of posture			CO4, CO5
A	Static and dynamic posture, postural control, kinetics and kinematics of posture			
B	Ideal posture analysis of posture			
C	Effects of posture on age, pregnancy, occupation and recreation			
Unit 5	Analysis Of Gait			CO4, CO5
A	General features of gait, gait initiation, kinematics and kinetics of gait, energy requirements, ..			
B	Kinematics and kinetics of the trunk and upper extremities in relation to gait, staircase climbing and running, effects of age, gender, assistive devices, disease, muscle weakness, paralysis, asymmetries of the lower extremities			
C	Injuries and malalignments in gait; Movement Analysis: ADL activities like sitting– to standing, lifting, various grips, pinches			
Mode of examination	Theory/Jury/Practical/Viva			
Weight age Distribution	CA	MTE	ETE	
	30%	20%	50%	
Text book/s *	1. Biomechanical principles: Frenkel 2. Joint Structure & Functions : Norkins 3. Biomechanics- Nordin			
Other References	1. Therapeutic exercise by Basmijjan & Wolf. 2. Muscle testing and functions - Kendall - Williams & Wilkins. 3. Clinical evaluation - Lacote (for Isolated assessment of abdominal muscles), Churchill Livingstone. 4. Muscle stretching & Auto stretching - Olaf Evjenth, Alpta Rehab Forlag. 5. Orthopedic Evaluation- Magee (only for assessment of posture), Saunders Elsevier. 6. Physiology of joints: Kapanji; vol 1,2 & 3 Note: Latest edition of the suggested books are recommended.			

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
CO201.1	2	3	3	3	3	3	3	3	3	2	2	3	3	3	3	2
CO201.2	3	3	2	3	3	3	3	3	3	3	3	2	3	3	3	2

CO201.3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3
CO201.4	3	3	3	3	3	3	3	3	2	3	2	2	3	2	3	2
CO201.5	3	2	3	3	3	3	3	3	2	3	2	2	3	3	2	3
CO201.6	3	3	2	3	3	3	3	3	3	2	2	2	3	2	3	2

School: SAHS		Batch : 2020-24
Program: BPT		Current Academic Year: 2021-22
Branch:		Semester:3rd
1	Course Code	BPT210
2	Course Title	Foundation of Exercise Therapy & soft Tissue Manipulation
3	Credits	5
4	Contact Hours (L-T-P)	4-1-0
	Course Type	Compulsory
5	Course Objective	1. Describe basic concepts of exercise therapy-positions, types of movements, classification 2. Demonstrate principles, application of techniques like goniometry, MMT 3. Describe types of pelvic tilt, normal and abnormal, muscle work involved. 4. Acquire knowledge of resisted exercises , types and techniques
6	Course Outcomes	CO1:At the completion of course the student shall be able to describe the basics of mechanicsinvolved in exercise therapy. CO2: Describe and demonstrate fundamental and derived positions, CO3: Describe and demonstrate active, passive, resisted movements and soft tissue manipulation CO4: Demonstrate and apply relaxation techniques CO5: Descibe the various assessment techniques needed during patient assessment and examination like Goniometry and Manual muscle testing. CO6: Describe the skills involved and benefits of various equipments used in therapeutic gymnasium.
7	Course Description	At the end of the course, the candidate will have a better understanding of the principles of exercise therapy both basic and advanced as well as assessment techniques. The student's skill will be enhanced through hands on training provided during the practical hours.

8	Outline syllabus			CO Mapping
	Unit 1	Introduction to Exercise Therapy		
	A	Introduction to Exercise Therapy- The aims of Exercise Therapy, The techniques of Exercise Therapy, Approach to patient's problems, Assessment of patient's condition –		CO1, CO2
	B	Measurements of Vital parameters		
	C	Starting Positions–Fundamental positions & derived Positions, Planning of Treatment		
	Unit 2	Methods of Testing		
	A	Measurement of Joint range by Goniometer		
	B	Tests for neuromuscular efficiency-Electric Test, MMT, Anthropometric Measurement, Static power Test, Dynamic power Test, Endurance test, Speed test, Co-ordination & sensation test, Pulmonary Function tests		CO1, CO5
	C	Measurement of Limb Length: true limb length, apparent limb length, segmental limb length, Measurement of the angle of Pelvic Inclination		
	Unit 3	Relaxation Therapy		
	A	Definitions: Muscle Tone, Postural tone, Voluntary Movement, Degrees of relaxation, Pathological tension in muscle		CO1, CO4
	B	Stress mechanics, types of stresses, Effects of stress on the body mechanism, Indications of relaxation, Methods & techniques of relaxation.		
	C	Principles & uses: General, Local, Jacobson's, Mitchell's, additional methods		
	Unit 4	Passive & Active Movements		CO1, CO2
	A	Classification, Principles, indications, contraindications, effects, uses & techniques of Passive movements		
	B	Classification, Principles, indications, contraindications, effects, uses & techniques of Active movements		
	C	Resisted Exercise its type, uses, Progressive resisted exercise & Isokinetic exercise, Open-Chain & Closed-Chain exercise.		
	Unit 5	Soft Tissue Manipulation		CO1, CO2
	A	History and Classification of Soft Tissue Manipulation		
	B	Principles, Indications and Contraindications		
	C	Technique, Physiological and Therapeutic Uses of Specific Manipulations		
	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%

Text book/s*	1) Practical exercise therapy - Hollis Blackwell scientific publication. 2) Therapeutic exercises basmajian William & Wilkins. 3) Therapeutic exercises foundations and techniques kisner& Colby La Davis. 4) Principle of exercise therapy Gardiner cbs Delhi. 5) Orthopedic physical therapy woods Churchill Livingstone. 6) Manual examination and treatment of spine and extremities wads worth.
Other Reference s	

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3	PSO 4
CO201.1	2	3	3	3	3	3	3	3	3	2	2	3	3	3	3	2
CO201.2	3	3	2	3	3	3	3	3	3	3	3	2	3	3	3	2
CO201.3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3
CO201.4	3	3	3	3	3	3	3	3	2	3	2	2	3	2	3	2
CO201.5	3	2	3	3	3	3	3	3	2	3	2	2	3	3	2	3
CO201.6	3	3	2	3	3	3	3	3	3	2	2	2	3	2	3	2

Template 4 -PRACTICAL

School: SAHS		Batch : 2020-24
Program: BPT		Current Academic Year: 2021-22
Branch:		Semester:3rd
1	Course Code	BPT 259
2	Course Title	Biomechanics & Kinesiology(I)LAB)
3	Credits	2
4	Contact Hours (L-T-P)	0-0-4
	Course Type	Compulsory
5	Course Objective	1. Describe the joint structure, classification and function of joints And biomechanics of Connective tissue 2. Describe the muscle structure and function of muscles, types of muscles, contractions and factors effecting muscle recruitment and function 3. Describe the biomechanics of the thoracic and chest wall and patho biomechanics associated with chest deformities 4. Describe the analysis of posture and gait during static and dynamic movement, relation with LOG, Pathomechanics of abnormal gait and posture.
6	Course Outcomes	CO1:On successful completion of this programme, students should be able to describe the understanding of basics of mechanics, muscle structure and

		contraction, factors effecting muscle contraction and recruitment CO2:Describe mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities CO3:Define normal mechanics and patho mechanics of TMJ associated with various conditions, CO4:Analyse normal mechanics of posture and gait in various planes and axis CO5:Analyse the patho mechanics associated with abnormal posture and gait. CO6: Describe biomechanics of shoulder,elbow,wrist,hip,knee,ankle joint ,nertebral column.		
7	Course Description	This Course Supplements the Knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics and their application in musculoskeletal and various other dysfunctions.		
8	Outline syllabus			CO Mapping
	Unit 1	Biomechanics of the vertebral column		
	A	Brief		CO1, CO6
	B	Movement		
	C	Muscles palpation of the Spine		
	Unit 2	Biomechanics of the Upper Limb		Co1,CO6
	A	Brief		
	B	Movement		
	C	Muscles palpation & joints of of Upper Limb		
	Unit 3	Biomechanics of the Lower Limb		CO1,CO6
	A	Brief		
	B	Movements		
	C	Muscles palpation & joints of of Lower Limb		
	Unit 4	Analysis of posture		CO4,CO5
	A	kinematics of posture		
	B	Normal posture		
	C	Abnormal posture		
	Unit 5	Analysis Of Gait		CO4,CO5
	A	Kinematics and kinetics of gait,		
	B	Normal Gait		
	C	Identify abnormal Gait		
	Mode of examination	Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	1. Biomechanical principles: Frenkel 2. Joint Structure & Functions : Norkins 3. Biomechanics- Nordin		

	Other References	1. Therapeutic exercise by Basmijjan & Wolf. 2. Muscle testing and functions - Kendall - Williams & Wilkins. 3. Clinical evaluation - Lacote (for Isolated assessment of abdominal muscles), Churchill Livingstone. 4. Muscle stretching & Auto stretching - Olaf Evjenth, Alpta Rehab Forlag. 5. Orthopedic Evaluation- Magee (only for assessment of posture), Saunders Elsevier. 6. Physiology of joints: Kapanji; vol 1,2 & 3 Note: Latest edition of the suggested books are recommended.	
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POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO201.1	2	3	3	3	3	3	3	3	3	2	2	
CO201.2	3	3	2	3	3	3	3	3	3	3	3	
CO201.3	3	3	3	3	3	3	3	3	3	3	3	
CO201.4	3	3	3	3	3	3	3	3	2	3	2	
CO201.5	3	2	3	3	3	3	3	3	2	3	2	
CO201.6	2	3	3	3	3	3	3	3	3	2	2	

TEMPLATE:PRACTICAL

School: SAHS		Batch : 2020-24
Program: BPT		Current Academic Year: 2021-22
Branch:SAHS		Semester:3rd
1	Course Code	BPT260
2	Course Title	Foundation of Exercise Therapy & soft Tissue Manipulation(LAB)
3	Credits	2
4	Contact	0-0-4

	Hours (L-T-P)		
	Course Type	Compulsory	
5	Course Objective	1. Describe basic concepts of exercise therapy-positions, types of movements, classification 2. Demonstrate principles, application of techniques like goniometry, MMT 3. Describe types of pelvic tilt, normal and abnormal, muscle work involved. 4. Acquire knowledge of resisted exercises , types and techniques	
6	Course Outcomes	CO1: At the completion of course the student shall be able to describe the basics of mechanics involved in exercise therapy. CO2: Describe and demonstrate fundamental and derived positions, vital parameters CO3: Describe and demonstrate active, passive, resisted movements and soft tissue manipulation CO4: Demonstrate and apply relaxation techniques CO5: Describe the various assessment techniques needed during patient assessment and examination like Goniometry and Manual muscle testing. CO6: Describe the skills involved and benefits of various equipments used in therapeutic gymnasium.	
7	Course Description	At the end of the course, the candidate will have a better understanding of the principles of exercise therapy both basic and advanced as well as assessment techniques. The student's skill will be enhanced through hands on training provided during the practical hours.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction to Exercise Therapy	
	A	Brief	CO1, CO2
	B	Measurements of Vital parameters	
	C	Demonstrate Starting Positions–Fundamental positions & amp; derived Positions, Planning of Treatment	
	Unit 2	Methods of Testing	
	A	Measurement of Joint range by Goniometer	
	B	Demonstrate MMT, Anthropometric Measurement, Static power Test, Dynamic power Test, Endurance test, Speed test, Co-ordination & sensation test, Pulmonary Function tests	CO1, CO5
	C	Measurement of Limb Length: true limb length, apparent limb length, segmental limb length, Measurement of the angle of Pelvic Inclination	
	Unit 3	Relaxation Therapy	
	A	Brief	CO1, CO4

	B	Methods of relaxation			
	C	Demonstration of relaxation techniques			
	Unit 4	Passive & Active Movements			CO1,CO2
	A	Brief			
	B	Demonstrate Techniques of active movement			
	C	Demonstrate Techniques of passive movements			
	Unit 5	Soft Tissue Manipulation			CO1,CO2
	A	Brief			
	B	Demonstrate the techniques			
	C	Therapeutic Uses of Specific Manipulations			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		60%	0%	40%	
	Text book/s*	1) Practical exercise therapy - Hollis Blackwell scientific publication. 2) Therapeutic exercises basmajian William & Wilkins. 3) Therapeutic exercises foundations and techniques kisner& Colby La Davis. 4) Principle of exercise therapy Gardiner cbs Delhi. 5) Orthopedic physical therapy woods Churchill Livingstone. 6) Manual examination and treatment of spine and extremities wads worth.			
	Other References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	2	3	3	3	3	3	3	3	3	2	2
CO201.2	3	3	2	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	2	3	2
CO201.5	3	2	3	3	3	3	3	3	2	3	2
CO201.6	3	3	2	3	3	3	3	3	3	2	2

SEMESTER 4

School: SAHS	Batch : 2020-24
Program: BPT	Current Academic Year: 2021-22
Branch:SAHS	Semester:4th
1 Course Code	BPT 219
2 Course	EXERCISE THERAPY

	Title	
3	Credits	7
4	Contact Hours (L-T-P)	6-1-0
	Course Type	Compulsory /Elective/Open Elective
5	Course Objective	In this course, the students will learn the principles and effects of exercise as a therapeutic modality and will learn the techniques in the restoration of physical functions.
6	Course Outcomes	CO1:At the end of the year the student will be able: To use & describe advanced therapeutic exercises used for devising rehabilitation protocol for various conditions. CO2:To know the benefits of hydrotherapy,balance and coordination exercise. CO3. To be able to perform various types of stretching of upper limb & lower limb, massage techniques,yoga balance and coordination exercises. CO4. To acquire the skills of application of various techniques to improve pulmonary function as well as to regain maximum strength of muscles, its therapeutic uses and merits-demerits of the same. CO5. To describe various assistive aids and gait training,posture.
7	Course Description	After the course on exercise therapy student will be able to understand the different types of exercise for the benefit of patient in different situations and conditions both in health and disease or disorder.
8	Outline syllabus	CO Mapping
	Unit 1	
	A	Specific exercise regimens
	B	Proprioceptive NeuromuscularFacilitation
	C	Functional Re-education
	Unit 2	
	A	Aerobic Exercise
	B	Stretching
	C	Manual Therapy &Peripheral JointMobilization
	Unit 3	
	A	Balance
	B	Co-ordinationExercise
	C	Posture

Unit 4			
A	WalkingAids		CO4,CO5
B	Basics in Manual Therapy & Applications with Clinical reasoning		
C	.Maitland,mulligan,Mckenzie,MuscleEnergyTechnique,Myofascialstretching,Cyriax Neuro Dynamic Testing		
Unit 5			
A	Hydrotherapy		CO2,CO3
B	Individual and Group Exercises		
C	Introduction to Yoga		
Mode of examination	Theory/Jury/Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Kisner and Colby. F.A. Davis, Therapeutic Exercises Foundations and Techniques 2. Williams and Wilkins, Therapeutic Exercise, Basmajian. 3. Hollis, Lab Exercise Therapy, Blackwell Scientific Publications. 4. Gardiner, Principle of Exercise Therapy, C.B.S. Delhi. 5. Norkins & White F.A. Davis, Measurement of Joint Motion: A Guide to Goniometry 6. Wood - W.B. Saunders, Beard's Massage.		
Other References	Reference Books: 1. Butterworth Heinmann, Hydrotherapy, Principles and Practices , Campion . 2. Kendal , Muscle testing and functions , Williams & Wilkins. 3. Daniels and Worthingham's - Muscle testing - Hislop & Montgomery - W.B. Saunder. 4. Edmond Mosby Manipulation and Mobilizations extremities and spinal techniques,. 5. Bates and Hanson , Aquatic Exercise Therapy , W.B. Saunders. 6. Wadsworth Lippincott Manual examination and treatment of spine and extremities. 7. Margaret Hollis, Massage for therapist: Margaret Hollis		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	2	3	3	2	3	3	3	2
CO201.2	2	3	3	3	3	2	3	2	3	3	3
CO201.3	3	3	3	3	3	3	3	3	2	3	2
CO201.4	2	3	3	3	2	3	2	3	3	3	3

CO201.5	3	3	2	3	3	3	3	3	3	3	3
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School: SAHS		Batch : 2020-24	
Program: BPT		Current Academic Year: 2021-22	
Branch:SAHS		Semester:4th	
1	Course Code	BPT 220	
2	Course Title	ELECTROTHERAPY	
3	Credits	7	
4	Contact Hours (L-T-P)	6-1-0	
	Course Type	Compulsory /Elective/Open Elective	
5	Course Objective	.The objective of this course is that the student will be able to list the indications and contra indications of various types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects .	
6	Course Outcomes	CO1: Able to demonstrate the techniques of application of various electrotherapy modalities. CO2: Able to select the appropriate modalities in different conditions CO3: Able to select the appropriate dosages of different Electrotherapy modalities to achieve the different goals CO4: Demonstrate the indication and contraindications of various modalities CO5: Demonstrate the treatment time, intensity according to the Acute, subacute & chronic conditions.	
7	Course Description	In this course the student will learn the principles, technique, and effects of electrotherapy as a therapeutic modality in the restoration of physical function.	
8	Outline syllabus		CO Mapping
	Unit 1	<u>LOW FREQUENCY CURRENTS</u>	
	A	Faradic Current, Galvanic Current: Techniques of Application of Individual, Muscle and Group Muscle stimulation, Physiological & Therapeutic effects of Faradic Current, Precautions, Indications & Contra-Indications, Dangers.	CO1, CO2
	B	TENS : Types, Placement of Electrodes, Dosage parameters, Physiological & Therapeutic effects, Indications & Contraindications	
	C	Pain: Define Pain, Theories of Pain ,Pain Gate Control theory in detail	

Unit 2	<u>ELECTRO-DIAGNOSIS</u>			
A	FGTest,SD Curve: Methods of Plotting SD Curve, Apparatus selection, Characters of Normally innervated Muscle, Characters of Partially Denervated Muscle, Characters of Completely denervated Muscle,Chronaxie & Rheobase.			
B	Nerve conduction velocity studies,EMG: Construction of EMG equipment.			CO1, CO3
C	Bio-feedback			
Unit 3	<u>MEDIUM FREQUENCY CURRENTS</u>			CO1,CO2
A	InterferentialTherapy:DefineIFT,Principleof ProductionofIFT,Physiological & Therapeutic effects,Indications&Contraindications.			
B	RussianCurrent			
C	ReboxtypeCurrent			
Unit 4	<u>THERMO&ACTINOTHERAPY(HIGH FREQUENCY CURRENTS)</u>			CO1,CO3
A	SWD, Pulsed ElectroMagnetic Energy, MicroWaveDiathermy:- PrincipleofProduction,Method,Types,Physiological&Therapeuticeffects,Indications & Contraindications,Dangers,Dosage parameters.			
B	Ultrasound, IRR, UVR:PrincipleofProduction,Method,Types,Physiological&Therapeuticeffect Indications & Contraindications,Dangers,Dosage parameters			
C	LASER: PrincipleofProduction,Method,Types,Physiological&Therapeuticeffect Indications & Contraindications,Dangers,Dosage parameters			
Unit 5	<u>SUPERFICIAL HEATING MODALITIES</u>			CO1,CO2,CO3
A	WaxTherapy, Contrast Bath, MoistHeatTherapy MethodofApplication,TherapeuticUses,Indications&Contraindications			
B	Fluidotherapy, WhirlPoolBath MethodofApplication,TherapeuticUses,Indications&Contraindications			
C	Cryotherapy:Principle,Physiological Therapeuticeffects, Techniques ofApplications, Indications& Contraindications, Dangers, Methods of application withdosages.			
Mode of examination	Theory/Jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	30%	20%	50%	
Text book/s*	1. Clayton's Electro Therapy, CBS Publishers & Distributors 2. Low & Read, Electro therapy Explained , Butterworth-Heinemann Limited, 2000			
Other References	1. Therapeutic heat and cold by Lehmann. 2. Principle and practice of Electrotherapy by Joseph Kahn.			

	3. Electrotherapy: Clinics in physical therapy- Wolf.	
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POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	2	3	2		3	3	2	3	3	3	3
CO201.2	3	3	2	3	3	3	3	3	3	3	3
CO201.3	3	3	2	3	3	3	3	3	3	3	3
CO201.4	3	2		3	3	3	3	3	3	3	3
CO201.5	3	2	3	3	3	2	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SAHS		Batch : 2020-24
Program: BPT		Current Academic Year: 2021-22
Branch:SAHS		Semester:4th
1	Course Code	BPT 218
2	Course Title	MEDICAL PHYSIOTHERAPY LAWÐICS
3	Credits	4
4	Contact Hours (L-T-P)	3-1-0
	Course Type	Compulsory /Elective/Open Elective
5	Course Objective	1.To know about evolution of Physiotherapy, identify various laws and regulation that should be followed during clinical practice of Physical Therapy.
6	Course Outcomes	CO1: On completion of the course the students should be able to know the medical law and ethics CO2:Able to know the legal and illegal issues faced in hospital CO3: The students should understand the code of ethics for physiotherapist CO4: They will be able to treat patient more lawfully in clinical and hospital setting and maintain their records. CO5:Understand the importance of Ethics in the relative field & basic concepts of Ethics.
7	Course Description	The students will enable to know about evolution of Physiotherapy, identify various laws and regulation that should be followed during clinical practice of Physical Therapy.

8	Outline syllabus			CO Mapping
	Unit 1	Medical ethics versus medical law		
	A	Introduction to Code of conduct		CO1, CO2
	B	Basic principles of medical ethics – Confidentiality		
	C	Malpractice and negligence- Rational and irrational drug therapy		
	Unit 2	Autonomy and informed consent- Right of patients		
	A	Care of the terminally ill- Euthanasia		
	B	Organ transplantation		CO1, CO3
	C	Medical diagnosis versus physiotherapy diagnosis		
	Unit 3	Medicolegal Aspects of Medical Records		
	A	Medicolegal case and type- Records and document related to MLC- ownership of medical records-		CO1, CO4
	B	Confidentiality Privilege communication		
	C	Release of medical information- Unauthorized disclosure- retention of medical records- other various aspects.		
	Unit 4	Professional Indemnity insurance policy		
	A	Development of standardized protocol to avoid near miss or sentinel events		
	B	Obtaining an informed consent		
	C	Biomedical ethical principles		
	Unit 5			CO1, CO3, CO5
	A	Code of ethics for physiotherapists		
	B	Ethics documents for physiotherapists		
	C	Laws affecting physiotherapy practice		
	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	2	2	3	3	2	2	2	2	2	2	2
CO2	2	3	2	2	2	2	2	2	2	2	2
CO3	2	2	2	3	2	3	2	2	2	2	2
CO4	3	2	2	3	2	2	2	2	2	2	2

CO5	3	2	2	2	2	2	2	2	2	2	2
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SEMESTER 4
Template 4 PRACTICAL

School: SAHS		Batch : 2020-24	
Program: BPT		Current Academic Year: 2021-22	
Branch:SAH S		Semester:4th	
1	Course Code	BPT 264	
2	Course Title	EXERCISE THERAPY	
3	Credits	6	
4	Contact Hours (L-T-P)	0-0-3	
	Course Type	Compulsory /Elective/Open Elective	
5	Course Objective	In this course, the students will learn the principles and effects of exercise as a therapeutic modality and will learn the techniques in the restoration of physical functions.	
6	Course Outcomes	CO1:At the end of the year the student will be able: To use & describe advanced therapeutic exercises used for devising rehabilitation protocol for various conditions. CO2:To know the benefits of hydrotherapy,balance and coordination exercise. CO3. To be able to perform various types of stretching of upper limb & lower limb, massage techniques,yoga balance and coordination exercises. CO4. To acquire the skills of application of various techniques to improve pulmonary function as well as to regain maximum strength of muscles, its therapeutic uses and merits-demerits of the same. CO5. To describe various assistive aids and gait training,posture.	
7	Course Description	After the course on exercise therapy student will be able to understand the different types of exercise for the benefit of patient in different situations and conditions both in health and disease or disorder.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Demonstrate Specific exercise regimens	CO1, CO2

	B	Demonstrate Proprioceptive NeuromuscularFacilitation techniques			
	C	Demonstrate techniques of Functional Re-education			
	Unit 2				
	A	Demonstrate Aerobic Exercise			
	B	Demonstrate techniques of Stretching			CO1, CO3
	C	Demonstrate Manual Therapy &Peripheral Joint Mobilization			
	Unit 3				
	A	Demonstrate methods of Balance			CO2,CO 5
	B	Demonstrate exercise for training Co-ordination			
	C	Assess Posture			
	Unit 4				
	A	Demonstrate different WalkingAids			CO4,CO 5
	B	Demonstrate Manual therapy			
	C	Demonstrate Maitland,mulligan,Mckenzie,MuscleEnergyTechnique,Myofascialstretching,Cyriax Neuro Dynamic Testing			
	Unit 5				
	A	Demonstrate Hydrotherapy			CO2,CO 3
	B	Demonstrate Individual and GroupExercises			
	C	Demonstrate different Yoga			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		60%	0%	40%	
	Text book/s*	1. Kisner and Colby. F.A. Davis, Therapeutic Exercises Foundations and Techniques 2. Williams and Wilkins, Therapeutic Exercise, Basmajian. 3. Hollis, Lab Exercise Therapy, Blackwell Scientific Publications. 4. Gardiner, Principle of Exercise Therapy, C.B.S. Delhi. 5. Norkins & White F.A. Davis, Measurement of Joint Motion: A Guide to Goniometry 6. Wood - W.B. Saunders, Beard's Massage.			
	Other References	Reference Books: 1. Butterworth Heinmann, Hydrotherapy, Principles and Practices , Campion . 2. Kendal , Muscle testing and functions , Williams & Wilkins. 3. Daniels and Worthingham's - Muscle testing - Hislop & Montgomery - W.B. Saunder. 4. Edmond Mosby Manipulation and Mobilizations extremities and spinal techniques,.			

	5. Bates and Hanson , Aquatic Exercise Therapy , W.B. Saunders. 6. Wadsworth Lippincott Manual examination and treatment of spine and extremities. 7. Margarett Hollis, Massage for therapist: Margarett Hollis	
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POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	2	3	3	2	3	3	3	2
CO201.2	2	3	3	3	3	2	3	2	3	3	3
CO201.3	3	3	3	3	3	3	3	3	2	3	2
CO201.4	2	3	3	3	2	3	2	3	3	3	3
CO201.5	3	3	2	3	3	3	3	3	3	3	3

Template 5 PRACTICAL

School: SAHS		Batch : 2020-24
Program: BPT		Current Academic Year: 2021-22
Branch:SAHS		Semester:4th
1	Course Code	BPT 265
2	Course Title	ELECTROTHERAPY
3	Credits	6
4	Contact Hours (L-T-P)	0-0-3
	Course Type	Compulsory /Elective/Open Elective
5	Course Objective	.The objective of this course is that the student will be able to list the indications and contra indications of various types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects .
6	Course Outcomes	CO1: Able to demonstrate the techniques of application of various electrotherapy modalities. CO2: Able to select the appropriate modalities in different conditions CO3: Able to select the appropriate dosages of different Electrotherapy modalities to achieve the different goals CO4: Demonstrate the indication and contraindications of various modalities CO5: Demonstrate the treatment time, intensity according to the Acute, subacute & chronic conditions.
7	Course Description	In this course the student will learn the principles, technique, and effects of electrotherapy as a

		therapeutic modality in the restoration of physical function.		
8	Outline syllabus	CO Mapping		
	Unit 1	<u>LOW FREQUENCY CURRENTS</u>		
	A	Techniques of Application of Individual, Muscle and Group Muscle stimulation.		CO1, CO2
	B	Faradism under pressure for UL and LL, Faradic foot bath		
	C	Placement of TENS Electrodes		
	Unit 2	<u>ELECTRO-DIAGNOSIS</u>		
	A	Demonstrate FGTest.		
	B	Plotting of SD curve with chronaxia and rheobase		CO1, CO3
	C	Application of Bio-feedback		
	Unit 3	<u>MEDIUM FREQUENCY CURRENTS</u>		
	A	Brief		
	B	Demonstration the methods		
	C	Application of electrodes in various regions		
	Unit 4	<u>THERMO&ACTINOTHERAPY(HIGH FREQUENCY CURRENTS)</u>		
	A	Demonstrate treatment technique of SWD, Pulsed ElectroMagnetic Energy,		
	B	Application of Ultrasound, IRR, UVR for different regions		
	C	Application of LASER for different regions		
	Unit 5	<u>SUPERFICIAL HEATING MODALITIES</u>		
	A	Demonstrate the Method of Application of Wax Therapy, Contrast Bath, Moist Heat Therapy		
	B	Demonstrate the Method of Application Fluidotherapy, WhirlPoolBath		
	C	Demonstrate the Techniques of Applications		
	Mode of examination	Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	1. Clayton's Electro Therapy, CBS Publishers & Distributors 2. Low & Read, Electro therapy Explained, Butterworth-Heinemann Limited, 2000		
	Other References	1. Therapeutic heat and cold by Lehmann. 2. Principle and practice of Electrotherapy by Joseph Kahn. 3. Electrotherapy: Clinics in physical therapy- Wolf.		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	2	3	2	3	3	3	2	3	3	3	3
CO201.2	3	3	2	3	3	3	3	3	3	3	3
CO201.3	3	3	2	3	3	3	3	3	3	3	3
CO201.4	3	2	3	3	3	3	3	3	3	3	3
CO201.5	3	2	3	3	3	2	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

FIFTH SEMESTER

Syllabus for Theory Subjects

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 5th	
1	Course Code	BPT 310
2	Course Title	Clinical Orthopedics&Traumatology

3	Credits	3-0		
4	Contact Hours (L)	3		
	Course Type	Compulsory		
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of orthopedic conditions causing disability, list the etiology, clinical features and methods of investigations and management.		
6	Course Outcomes	The student will be able to: CO1: Demonstrate an understanding of orthopaedic conditions causing disability, list the etiology clinical features and methods of investigations and management. CO2: To understand the traumatology of upper and lower limb fractures with their management. CO3: To understand the pathophysiology of various musculoskeletal conditions congenital and acquired anomalies with its treatment protocol. CO4: To understand the management of various orthopaedic surgeries. CO5: To understand various injuries and deformities of musculoskeletal system with its treatment Protocol.		
7	Course Description	This subject follows the basic science subjects to provide the knowledge about Orthopedic conditions the therapist would encounter in their practice.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Fractures of upper and lower limbs and spine		CO1, CO2
	B	Disease of Bones and Joints		
	C	Congenital and Acquired deformities		
	Unit 2			
	A	Inflammatory and Degenerative Conditions		
	B	Neuromuscular Disorders		CO1, CO3
	C	Cervical and Lumbar Pathology		
	Unit 3			
	A	Orthopedic Surgeries		
	B	Regional Conditions		
	C	Syndromes		
	Mode of examination	Theory/		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	Outline of Fractures—John Crawford Adams. 2. Outline of Orthopedics.— John Crawford Adams. 3. Text book of Orthopedics.—Maheswari. 4. Apley's		

	Orthopedics. 5. Textbook of Orthopedics and Traumatology— M.N.Natarajan	
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POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	2	2	3	3	3	3	3	3
CO2	2	3	3	3	3	3	3	3	3	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3

Template 1 (2)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 5th	
1	Course Code	BPT 350	
2	Course Title	Clinical Orthopedics&Traumatology (Practical)	
3	Credits	1	
4	Contact Hours (P)	2	
	Course Type	Compulsory	
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of orthopedic conditions causing disability, list the etiology, clinical features and methods of investigations and management.	
6	Course Outcomes	<p>The student will be able to:</p> <p>CO1: Demonstrate an understanding of orthopaedic conditions causing disability, list the etiology clinical features and methods of investigations and management.</p> <p>CO2: To understand the traumatology of upper and lower limb fractures with their management.</p> <p>CO3: To understand the pathophysiology of various musculoskeletal conditions congenital and acquired anomalies with its treatment protocol.</p> <p>CO4: To understand the management of various orthopaedic surgeries.</p> <p>CO5: To understand various injuries and deformities of musculoskeletal system with its treatment Protocol.</p>	
7	Course Description	This subject follows the basic science subjects to provide the knowledge about Orthopedic conditions the therapist would encounter in their practice.	

8	Outline syllabus		CO Mapping
	Unit 1		
	A	Fractures of upper and lower limbs and spine	CO1, CO2
	B	Disease of Bones and Joints	
	C	Congenital and Acquired deformities	
	Unit 2		
	A	Inflammatory and Degenerative Conditions	
	B	Neuromuscular Disorders	CO1, CO3
	C	Cervical and Lumbar Pathology	
	Unit 3		
	A	Orthopedic Surgeries	
	B	Regional Conditions	
	C	Syndromes	
	Mode of examination	Practical	
	Weightage Distribution	CA 60%	MTE 0%
			ETE 40%
	Text book/s*	Outline of Fractures—John Crawford Adams. 2. Outline of Orthopedics.— John Crawford Adams. 3. Text book of Orthopedics.—Maheswari. 4. Apley's Orthopedics. 5. Textbook of Orthopedics and Traumatology— M.N.Natarajan	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	2	3	3	3	3	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3	2	3
CO3	3	3	3	2	3	3	3	3	3	2	3
CO4	3	3	3	3	3	2	3	3	2	2	3
CO5	3	2	3	3	2	2	3	3	3	2	3

Template 2 (1)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 5th semester	
1	Course Code	BPT 309
2	Course Title	General Surgery
3	Credits	3-0
4	Contact Hours (L)	3
	Course Type	Compulsory
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of surgical conditions causing disability, list the etiology, clinical

		features and methods of investigations and management.		
6	Course Outcomes	The student will be able to: CO1: List the indications for surgery, etiology, clinical features and surgical methods for various conditions CO2: Plan a better rehabilitation care for patients pre and post surgically CO3: clinical decision making ability and management expertise CO4: diagnose condition from history taking, clinical evaluation and investigation in antenatal and postnatal care. CO5: To understand various injuries with its treatment Protocol		
7	Course Description	This course is designed to develop the basic science subjects which will help to provide the basic knowledge about relevant aspects of General Surgery. This will help student gain better understanding of various surgical conditions a therapist encounters during their practice. It will help them understand common surgical conditions and procedures so that implication of rehabilitation to surgical patients become easy.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Fluid, Electrolyte and Acid-Base disturbances		CO1, CO2
	B	Reasons for Surgery		
	C	Surgical Oncology		
	Unit 2			
	A	Diseases of the Arteries and Veins		
	B	Disorders of the Heart		CO1, CO3
	C	Thoracic surgeries		
	Unit 3			
	A	Burn		CO4, CO5
	B	Disorders of the Chest Wall, Lung and Mediastinum		
	C	Describe the normal and abnormal physiological event in gynae conditions		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	General Surgical Operations – by Kirk / Williamson 2. Surgery by Nan 3. Bailey and Love's – Short Practice of Surgery 4. Chest Disease by Crofton and Douglas. 5. Patricia A Downie, Text book of Heart, Chest Vascular Disease for physiotherapists, JP Br		

POs COs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	2	2	3	3	3	3	3	2	3
CO2	2	3	3	3	3	2	3	3	3	3	3

CO3	3	3	2	2	2	2	2	2	2	2	3
CO4	3	3	3	3	3	2	2	3	2	2	3
CO5	3	3	2	3	3	2	3	3	3	3	3

Template 2 (2)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 5th semester	
1	Course Code	BPT 359	
2	Course Title	General Surgery (Practical)	
3	Credits	1	
4	Contact Hours (P)	2	
	Course Type	Compulsory	
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of surgical conditions causing disability, list the etiology, clinical features and methods of investigations and management.	
6	Course Outcomes	The student will be able to: CO1: List the indications for surgery, etiology, clinical features and surgical methods for various conditions CO2: Plan a better rehabilitation care for patients pre and post surgically CO3: clinical decision making ability and management expertise CO4: diagnose condition from history taking, clinical evaluation and investigation in antenatal and postnatal care. CO5: To understand various injuries with its treatment Protocol	
7	Course Description	This course is designed to develop the basic science subjects which will help to provide the basic knowledge about relevant aspects of General Surgery. This will help student gain better understanding of various surgical conditions a therapist encounters during their practice. It will help them understand common surgical conditions and procedures so that implication of rehabilitation to surgical patients become easy.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Fluid, Electrolyte and Acid-Base disturbances	CO1, CO2
	B	Reasons for Surgery	
	C	Surgical Oncology	
	Unit 2		
	A	Diseases of the Arteries and Veins	
	B	Disorders of the Heart	CO1, CO3
	C	Thoracic surgeries	
	Unit 3		
	A	Burn	CO4, CO5
	B	Disorders of the Chest Wall, Lung and Mediastinum	

C	Describe the normal and abnormal physiological event in gynae conditions		
Mode of examination	Practical		
Weightage Distribution	CA	MTE	ETE
	60%	0%	40%
Text book/s*	General Surgical Operations – by Kirk / Williamson 2. Surgery by Nan 3. Bailey and Love's – Short Practice of Surgery 4. Chest Disease by Crofton and Douglas. 5. Patricia A Downie, Text book of Heart, Chest Vascular Disease for physiotherapists, JP Br		

POs COs	P O 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	2	2	3	3	3	3	3	2	3
CO2	2	3	3	3	3	2	3	3	3	3	3
CO3	3	3	2	2	2	2	2	2	2	2	3
CO4	3	3	3	3	3	2	2	3	2	2	3
CO5	3	3	2	3	3	2	3	3	3	3	3

Template 3 (1)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 5th semester	
1	Course Code	BPT 308
2	Course Title	General Medicine, Paediatrics & psychiatry
3	Credits	3-0
4	Contact Hours (L)	3
	Course Type	Compulsory
5	Course Objective	The objective of this course is that after 60 hours of lectures, demonstrations, in addition to clinics the student will be able to demonstrate a general understanding of the diseases that therapists would encounter in their practice. They should have a brief idea of the etiology and pathology, what the patient's symptoms and the resultant functional disability. This would help the candidates to understand the limitation imposed by the diseases on any therapy that may be prescribed.
6	Course	The student will be able to:

	Outcomes	CO1 : To understand pathophysiological changes in infectious and metabolic disorders with their treatment CO2 : To understand pathophysiological changes in respiratory disorders with their treatment CO3 : To understand pathophysiological changes in cardiovascular disorders with their treatment CO4 : To understand pathophysiological changes in hematological conditions with their treatment CO5: The student will be able to differentiate pediatric cases and handling the cases will become easier as they can relate theoretical knowledge with practical learning	
7	Course Description	It covers relevant aspects of General Medicine and Pediatrics conditions in which Physiotherapy play a significant role . This course is designed to develop the basic knowledge of Pediatrics and to understand a pediatric patient, its special needs in relation to physical therapy which will help them provide good rehabilitation.	
8	Outline syllabus	CO Mapping	
	Unit 1		
	A	Infection	CO1, CO2
	B	Poisoning	
	C	Endocrine diseases	
	Unit 2		
	A	Diseases of the blood	
	B	Food and Nutrition	CO1, CO3
	C	Diseases of the digestive system	
	Unit 3		
	A	Congenital abnormalities and management	CO3, CO4
	B	Epilepsies and Modalities of psychiatric treatment, Psychiatric illness and physical therapy link	
	C	Orthopedic and Neuromuscular disorders in childhood and Child psychiatry: Brief descriptions of manifestations, and management of childhood disorders attention deficit syndrome, and behavioral disorders	
	Unit 4		
	A	Sensory disorders	CO2, CO1
	B	Learning and behavioural problems and Brief description of Etio-pathogenesis, manifestations, and management of psychiatric illness a. Drug dependence and alcoholism b. Somatoform and Dissociate Disorders – conversion reactions, Somatization, Dissociate Amnesia, and Dissociate Fugue c. Personality disorders. Geriatric Psychiatry.	
	C	CerebralPalsy and Brief description of Etio-pathogenesis, manifestations, and management of psychiatric illnesses a. Anxiety neurosis b. Depression c. Obsessive compulsive neurosis d. Psychosis- Definition & types e. Maniac-depressive psychosis. Post-traumatic stress disorder g. Psychosomatic reactions: Stress and Health.	
	Mode of examination	Theory	

Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Davidson principle and practice of medicine. 2. Clinical methods of medicine by Hutchinson 3. Nelson text book of pediatrics-Behraman & varghan. 4. Essential pediatric by O.P Ghai		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	2	2	3	3	3	3	3	3
CO2	2	3	3	3	3	3	3	3	3	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3

Template 3 (2)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 5th semester	
1	Course Code	BPT 358	
2	Course Title	General Medicine, Paediatrics & psychiatry (Practical)	
3	Credits	1	
4	Contact Hours (P)	2	
	Course Type	Compulsory	
5	Course Objective	The objective of this course is that after 60 hours of lectures, demonstrations, in addition to clinics the student will be able to demonstrate a general understanding of the diseases that therapists would encounter in their practice. They should have a brief idea of the etiology and pathology, what the patient's symptoms and the resultant functional disability. This would help the candidates to understand the limitation imposed by the diseases on any therapy that may be prescribed.	
6	Course Outcomes	The student will be able to: CO1 : To understand pathophysiological changes in infectious and metabolic disorders with their treatment CO2 : To understand pathophysiological changes in respiratory disorders with their treatment CO3 : To understand pathophysiological changes in cardiovascular disorders with their treatment CO4 : To understand pathophysiological changes in hematological conditions with their treatment CO5: The student will be able to differentiate pediatric cases and handling the cases will become easier as they can relate theoretical knowledge with practical learning	

7	Course Description	It covers relevant aspects of General Medicine and Pediatrics conditions in which Physiotherapy play a significant role . This course is designed to develop the basic knowledge of Pediatrics and to understand a pediatric patient, its special needs in relation to physical therapy which will help them provide good rehabilitation.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Infection	CO1, CO2	
	B	Poisoning		
	C	Endocrine diseases		
	Unit 2			
	A	Diseases of the blood		
	B	Food and Nutrition	CO1, CO3	
	C	Diseases of the digestive system		
	Unit 3			
	A	Congenital abnormalities and management	CO3, CO4	
	B	Epilepsies and Modalities of psychiatric treatment, Psychiatric illness and physical therapy link		
	C	Orthopedic and Neuromuscular disorders in childhood and Child psychiatry: Brief descriptions of manifestations, and management of childhood disorders attention deficit syndrome, and behavioral disorders		
	Unit 4			
	A	Sensory disorders	CO2, CO1	
	B	Learning and behavioural problems and Brief description of Etio-pathogenesis, manifestations, and management of psychiatric illness a. Drug dependence and alcoholism b. Somatoform and Dissociate Disorders – conversion reactions, Somatization, Dissociate Amnesia, and Dissociate Fugue c. Personality disorders. Geriatric Psychiatry.		
	C	CerebralPalsy and Brief description of Etio-pathogenesis, manifestations, and management of psychiatric illnesses a. Anxiety neurosis b. Depression c. Obsessive compulsive neurosis d. Psychosis- Definition & types e. Maniac-depressive psychosis. Post-traumatic stress disorder g. Psychosomatic reactions: Stress and Health.		
	Mode of examination	Practical		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	<ol style="list-style-type: none"> Davidson principle and practice of medicine. Clinical methods of medicine by Hutchinson Nelson text book of pediatrics-Behraman & varghan. Essential pediatric by O.P Ghai 		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	2	2	3	3	3	3	3	3
CO2	2	3	3	3	3	3	3	3	3	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3

Template 4 (1)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 5th semester	
1	Course Code	BPT 311	
2	Course Title	CommunityMedicine	
3	Credits	4-0	
4	Contact Hours (L)	4	
	Course Type	Compulsory	
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of various aspects of health and disease list the methods of health administration, health education and disease preventive measures.	
6	Course Outcomes	The student will be able to: CO1:to understand concept of community CO2: To understand role of rural and urban communities in public health CO3:To understand role of community in determining beliefs, practices and home remedies in treatment CO4:To understand various aspect of health and disease in community CO5: To understand health education and disease preventive measures.	
7	Course Description	Subject follows the basic science subjects to provide the knowledge about conditions the therapist would encounter in their practice in the community	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	HealthandDisease	CO1, CO2
	B	Epidemiology,definitionandscope	

	C	Publichealthadministration		
	Unit 2			
	A	HealthprogrammeinIndia		
	B	Hospital waste management		CO1, CO3
	C	DisasterManagement		
	Unit 3			
	A	Occupational Health		
	B	HealthEducation		
	C	Nutritional educaiton		
	Mode of examination	Theory		
	Weightage Distribution	CA 30%	MTE 20%	ETE 50%
	Text book/s*	Park and Park		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3
CO4	2	3	3	3	3	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3

Template 4 (2)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 5th semester	
1	Course Code	BPT 351
2	Course Title	CommunityMedicine (Practical)
3	Credits	1
4	Contact Hours (P)	2
	Course Type	Compulsory
5	Course Objective	The objective of this course is that after 60 hrs of lectures and discussion the student will be able to demonstrate an understanding of various aspects of health and disease list the methods of health administration, health education and disease preventive measures.
6	Course Outcomes	The student will be able to: CO1:to understand concept of community CO2: To understand role of rural and urban communities in public health CO3:To understand role of community in determining beliefs, practices and home remedies in treatment CO4:To understand various aspect of health and disease in community CO5: To understand health education and disease preventive measures.

7	Course Description	Subject follows the basic science subjects to provide the knowledge about conditions the therapist would encounter in their practice in the community		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	HealthandDisease	CO1, CO2	
	B	Epidemiology,definitionandscope		
	C	Publichealthadministration		
	Unit 2			
	A	HealthprogrammeinIndia		
	B	Hospital waste management	CO1, CO3	
	C	DisasterManagement		
	Unit 3	CO4, CO5		
	A	Occupational Health		
	B	HealthEducation		
	C	Nutritional eductaion		
	Mode of examination	Practical		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	Park and Park		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3
CO4	2	3	3	3	3	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3

Template 5 (1)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 5th semester	
1	Course Code	BPT 312
2	Course Title	Interpretation of Diagnostic imaging technology
3	Credits	2-0
4	Contact Hours (L)	2
	Course Type	Compulsory

5	Course Objective	This course covers the study of common diagnostic and therapeutic Imaging tests. At the end of the course students will be aware of the indications and implications of commonly used diagnostic imaging tests as they pertain to patient's management.		
6	Course Outcomes	The student will be able to: CO1: Understand the CLINICAL and TECHNICAL (including, the science and research) aspects of radiology. CO2: Recognize basic anatomy and pathology as seen on imaging studies. CO3: Be able to interpret major findings on Chest X-Ray CO4: Know and understand safety issues in Radiology clinical practice CO5: To understand interpretation of CT and MRI		
7	Course Description	The course will cover that how X-Ray, CT, MRI, Ultrasound and Other Medical Images are created and how they help the health professionals to save lives.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Image interpretation		CO1, CO2
	B	radiography		
	C	fluoroscopy		
	Unit 2			
	A	CT		
	B	MRI		CO1, CO3
	C	US and endoscopy		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	Textbook of radiology		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3
CO4	2	3	3	3	3	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3

Template 5 (2)

School:		Allied health science		Batch : 2020-24	
Program:		BPT		Current Academic Year: 2022-23	
Branch:		Semester: 5th semester			
1	Course Code	BPT 352			
2	Course Title	Interpretation of Diagnostic imaging technology (Practical)			
3	Credits	1			
4	Contact Hours (P)	2			
	Course Type	Compulsory			
5	Course Objective	This course covers the study of common diagnostic and therapeutic Imaging tests. At the end of the course students will be aware of the indications and implications of commonly used diagnostic imaging tests as they pertain to patient's management.			
6	Course Outcomes	The student will be able to: CO1: Understand the CLINICAL and TECHNICAL (including, the science and research) aspects of radiology. CO2: Recognize basic anatomy and pathology as seen on imaging studies. CO3: Be able to interpret major findings on Chest X-Ray CO4: Know and understand safety issues in Radiology clinical practice CO5: To understand interpretation of CT and MRI			
7	Course Description	The course will cover that how X-Ray, CT, MRI, Ultrasound and Other Medical Images are created and how they help the health professionals to save lives.			
8	Outline syllabus				CO Mapping
	Unit 1				
	A	Image interpretation			CO1, CO2
	B	radiography			
	C	fluoroscopy			
	Unit 2				
	A	CT			
	B	MRI			CO1, CO3
	C	US and endoscopy			
	Mode of examination	Practical			
	Weightage Distribution	CA	MTE	ETE	
		60%	0%	40%	
	Text book/s*	Textbook of radiology			

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
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COs											
CO1	3	3	3	3	3	2	3	3	3	2	3
CO2	3	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3
CO4	2	3	3	3	3	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3

SEMESTER-6

Template 1 (1)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 6th semester	
1	Course Code	BPT 316	
2	Course Title	Physiotherapy in Orthopedics & sports	
3	Credits	5-0-0	
4	Contact Hours (L)	5	
	Course Type	Compulsory	
5	Course Objective	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify disabilities due to musculoskeletal dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore musculoskeletal function.	
6	Course Outcomes	<p>The student will be able to:</p> <p>CO1: To understand traumatology of Upper and lower limb fractures, with their treatment protocols.</p> <p>CO2: Assess the patients with musculoskeletal conditions.</p> <p>CO3: To understand the pathophysiology of various inflammatory and infective conditions of musculoskeletal system with its treatment protocol.</p> <p>CO4: To understand PT evaluation of Orthopedic conditions.</p> <p>CO5: To understand PT management of Orthopedic conditions.</p>	
7	Course Description	Following the basic science course, this course introduces the student to the orthopedic conditions which commonly cause disability. Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitation imposed by orthopedic pathology on the functioning of the individual	
8	Outline syllabus		CO Mapping
	Unit 1		

	A	PT assessmentfor Orthopedic conditions		CO1, CO2
	B	Fractures		
	C	Specificfractures anddislocations		
	Unit 2			
	A	Selection andapplication of physiotherapeutic techniques		
	B	Principlesof various schoolsof thought in manual therapy		CO1, CO3
	C	Degenerativeandinflammatoryconditions		
	Unit 3			CO3, CO4
	A	Infective conditions and IntroductiontoBio-Engineering		
	B	Cerebralpalsy		
	C	Poliomyelitis and lower limb injuries		
	Unit 4			CO5, CO1
	A	Leprosy		
	B	Amputation		
	C	Upper limb injuries and spinal conditions		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	Tidy's physiotherapy. 2. Textbook of orthopedics-Cash. 3. Clinical orthopedic rehabilitation-Brotzman. 4. Orthopedic physiotherapy - Jayant Joshi. 5. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz 6. Sports physiotherapy- Maria Zuluaga		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	2	3	3	2	3	3	3
CO2	3	2	3	3	3	3	3	3	3	3	3
CO3	2	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	2	3	3
CO5	2	3	3	3	3	3	3	3	3	3	3

Template 1 (2)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 6th semester	
1	Course Code	BPT 360
2	Course Title	PhysiotherapyinOrthopedics& sports (Practical)
3	Credits	2
4	Contact Hours (P)	4
	Course Type	Compulsory
5	Course	Theobjectiveofthe courseisthatafterthespecifiedhours oflectures and

	Objective	demonstrationsthestudent willbe ableto identifydisabilities duetomusculoskeletaldysfunction,plan andsettreatmentgoals and applytheskills gainedinexercisetherapyandelectrotherapyintheseclinical situations to restore musculoskeletal function.		
6	Course Outcomes	The student will be able to: CO1: To understand traumatology of Upper and lower limb fractures, with their treatment protocols. CO2: Assess the patients with musculoskeletal conditions. CO3: To understand the pathophysiology of various inflammatory and infective conditions of musculoskeletal system with its treatment protocol. CO4: To understand PT evaluation of Orthopedic conditions. CO5: To understand PT management of Orthopedic conditions.		
7	Course Description	Following the basic science course, this course introduces the student to the orthopedic conditions which commonly cause disability. Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitation imposed by orthopedic pathology on the functioning of the individual		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	PT assessmentfor Orthopedic conditions		CO1, CO2
	B	PT management for orthopedic conditions		
	C	Specificfractures anddislocations		
	Unit 2			
	A	Selection andapplication of physiotherapeutic techniques		
	B	Principlesof various schoolsof thought in manual therapy		CO1, CO3
	C	Degenerativeandinflammatoryconditions		
	Unit 3	CO3, CO4		
	A	Infective conditions and IntroductiontoBio-Engineering		
	B	Cerebralpalsy		
	C	Poliomyelitis and lower limb injuries		
	Unit 4	CO5, CO1		
	A	Leprosy		
	B	Amputation		
	C	Upper limb injuries and spinal conditions		
	Mode of examination	Practical		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	Tidy's physiotherapy. 2. Textbook of orthopedics- Cash. 3. Clinical orthopedic rehabilitation- Brotzman. 4. Orthopedic physiotherapy - Jayant Joshi. 5. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz 6. Sports physiotherapy- Maria Zuluaga		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	2	3	3	2	3	3	3
CO2	3	2	3	3	3	3	3	3	3	3	3
CO3	2	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	2	3	3
CO5	2	3	3	3	3	3	3	3	3	3	3

Template 2 (1)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 6th semester	
1	Course Code	BPT 313	
2	Course Title	Physiotherapy in General Surgery and General Medicine	
3	Credits	5-0-0	
4	Contact Hours (L)	5	
	Course Type	Compulsory	
5	Course Objective	Acquire the knowledge of evaluation and physiotherapeutic treatment for obstetric and gynecological conditions Acquire the knowledge of various conditions where physiotherapy plays a vital role in the rehabilitation	
6	Course Outcomes	The student will be able to: CO1 : To understand pathophysiological changes in infectious and metabolic disorders with their PT treatment CO2 : To understand pathophysiological changes in respiratory disorders with their PT treatment CO3 : To understand pathophysiological changes in cardiovascular disorders with their PT treatment CO4: Diagnose condition from history taking, clinical evaluation and investigation in antenatal and postnatal care. CO5: To understand various injuries with its treatment Protocol	
7	Course Description	To Identify, discuss and analyze cardiovascular and pulmonary dysfunction. Acquire knowledge of a range of basic investigative approaches in the medical system and surgical intervention.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Physiotherapy in mother and child care	CO1, CO2
	B	Geriatrics	
	C	Abdominal incisions and complications of operations	
	Unit 2		
	A	Physiotherapy in pre and post-operative stages	
	B	Operations on upper G.I.T.-esophagus, stomach, duodenum	CO1, CO3

	C	Operations on large and small intestine and PT in dentistry			
	Unit 3				CO4, CO5
	A	Burns and its treatment			
	B	Management of wound ulcers and PT in derma			
	C	ENT conditions			
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	Tidy's physiotherapy. 2. Textbook of orthopedics- Cash. 3. Clinical orthopedic rehabilitation- Brotzman. 4. Orthopedic physiotherapy - Jayant Joshi. 5. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz 6. Sports physiotherapy- Maria Zuluaga			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	3	3	3	2	3	3
CO2	3	3	3	3	3	3	3	3	3	2	3
CO3	2	3	3	3	3	2	3	3	3	3	3
CO4	3	3	3	3	3	3	2	2	3	3	3
CO5	3	3	3	3	2	2	3	3	3	3	3

Template 2 (2)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 6th semester	
1 Course Code	BPT 361	
2 Course Title	Physiotherapy in General Surgery and General Medicine (Practical)	
3 Credits	2	
4 Contact Hours (P)	4	
Course Type	Compulsory	
5 Course Objective	Acquire the knowledge of evaluation and physiotherapeutic treatment for obstetric and gynecological conditions Acquire the knowledge of various conditions where physiotherapy plays a vital role in the rehabilitation	
6 Course Outcomes	The student will be able to: CO1 : To understand pathophysiological changes in infectious and metabolic disorders with their PT treatment CO2 : To understand pathophysiological changes in respiratory disorders with their PT treatment CO3 : To understand pathophysiological changes in cardiovascular disorders with their PT treatment CO4: Diagnose condition from history taking, clinical evaluation and investigation in antenatal and postnatal care. CO5: To understand various injuries with its treatment Protocol	

7	Course Description	To Identify, discuss and analyze cardiovascular and pulmonary dysfunction. Acquire knowledge of rational of basic investigative approaches in the medical system and surgical intervention.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Physiotherapy in mother and child care		CO1, CO2
	B	Geriatrics		
	C	Abdominal incisions and complications of operations		
	Unit 2			
	A	Physiotherapy in pre and post-operative stages		
	B	Operations on upper G.I.T.-esophagus, stomach, duodenum		CO1, CO3
	C	Operations on large and small intestine and PT in dentistry		
	Unit 3			CO4, CO5
	A	Burns and its treatment		
	B	Management of wound, ulcers and PT in derma		
	C	ENT conditions		
	Mode of examination	Practical		
	Weightage Distribution	CA 60%	MTE 0%	ETE 40%
	Text book/s*	Tidy's physiotherapy. 2. Textbook of orthopedics-Cash. 3. Clinical orthopedic rehabilitation-Brotzman. 4. Orthopedic physiotherapy - Jayant Joshi. 5. Physical Rehabilitation Assessment and Treatment – O'Sullivan Schmitz 6. Sports physiotherapy- Maria Zuluaga		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	3	3	3	2	3	3
CO2	3	3	3	3	3	3	3	3	3	2	3
CO3	2	3	3	3	3	2	3	3	3	3	3
CO4	3	3	3	3	3	3	2	2	3	3	3
CO5	3	3	3	3	2	2	3	3	3	3	3

Template 3 (1)

School:	Allied health science	Batch : 2020-24
Program:	BPT	Current Academic Year: 2022-23
Branch:	Semester: 6th semester	
1	Course Code	BPT 314
2	Course Title	Clinical Neurology & Neurosurgery

3	Credits	3-0-0
4	Contact Hours (L)	3
	Course Type	Compulsory
5	Course Objective	<p>The objective of this course is that after 60 hours of lectures & demonstrations. In adding to clinics, the students will be able to demonstrate an understanding of neurological conditions causing disability and their management in addition, the student will be able to fulfill with 75% accuracy (as measured by written, oral& practical, internal evaluation) the following objectives of the course.</p> <p>An understanding of the approach of neurologists to the health care of people with neurologic conditions.</p> <p>Begin to understand an educational plan for continuous learning throughout the professional career.</p> <p>An understanding of the influence of family, community, and society in the care of people with neurological</p>
6	Course Outcomes	<p>The student will be able to:</p> <p>CO1:To understand pathophysiological changes in neurological disorders with their treatment</p> <p>CO2:To understand the management of various neurosurgeries</p> <p>CO3:clinical decision making ability and management expertise</p> <p>CO4:Plan a better rehabilitation care for patients pre and postneurosurgery</p> <p>CO5: To understand the management of various neurological condition and its treatment</p>
7	Course Description	Following the basic science and clinical science course, this course introduces the student to the neurological conditions which commonly cause disability.
8	Outline syllabus	CO Mapping
	Unit 1	
	A	Neurological assessment, classification and disorders
	B	Neuro ophthalmology
	C	Deafness, vertigo, and imbalance
	Unit 2	
	A	Cerebro-vascular diseases
	B	Lower cranial nerve paralysis
	C	Head injury, metabolic, environmental disorders
	Unit 3	CO4, CO5
	A	Movement and cerebral disorders
	B	Cerebellar and coordination disorders
	C	Spinal cord disorders, peripheral and polyneuropathy
	Unit 4	CO3, CO5
	A	Multiple sclerosis, tumors,
	B	Neuromuscular junction disorders and polyneuropathy
	C	Motor neuron disorders and pediatric disorders

	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	Davidson's Principles and Practice of Medicine 2. Textbook of Neurology- Victor Adams 3. Brains Clinical Neurology. 4 .Illustrated Neurology & Neurosurgery 5. Brains Diseases of Nervous System			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	3	3	3	3	3	3
CO2	2	3	2	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	2	3	3	3	3
CO4	3	3	3	2	3	2	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3

Template 3 (2)

School:		Allied health science	Batch : 2020-24
Program:		BPT	Current Academic Year: 2022-23
Branch:		Semester: 6th semester	
1	Course Code	BPT 362	
2	Course Title	Clinical Neurology& Neurosurgery (Practical)	
3	Credits	1	
4	Contact Hours (P)	3	
	Course Type	Compulsory	
5	Course Objective	<p>The objective of this course is that after 60 hours of lectures & demonstrations. In adding to clinics, the students will be able to demonstrate an understanding of neurological conditions causing disability and their management in addition, the student will be able to fulfill with 75% accuracy (as measured by written, oral& practical, internal evaluation) the following objectives of the course.</p> <p>An understanding of the approach of neurologists to the health care of people with neurologic conditions.</p> <p>Begin to understand an educational plan for continuous learning throughout the professional career.</p> <p>An understanding of the influence of family, community, and society in the care of people with neurological</p>	
6	Course Outcomes	<p>The student will be able to:</p> <p>CO1:To understand pathophysiological changes in neurological disorders with their treatment</p> <p>CO2:To understand the management of various neurosurgeries</p> <p>CO3:clinical decision making ability and management expertise</p> <p>CO4:Plan a better rehabilitation care for patients pre and postneurosurgery</p> <p>CO5: To understand the management of various neurological condition and its treatment</p>	

7	Course Description	Following the basic science and clinical science course, this course introduces the student to the neurological conditions which commonly cause disability.		
8	Outline syllabus	CO Mapping		
	Unit 1			
	A	Neurological assessment, classification and disorders		CO1, CO2
	B	Neuro ophthalmology		
	C	Deafness, vertigo, and imbalance		
	Unit 2			
	A	Cerebro-vascular diseases		
	B	Lower cranial nerve paralysis		CO1, CO3
	C	Head injury, metabolic, environmental disorders		
	Unit 3	CO4, CO5		
	A	Movement and cerebral disorders		
	B	Cerebellar and coordination disorders		
	C	Spinal cord disorders, peripheral and polyneuropathy		
	Unit 4	CO3, CO5		
	A	Multiple sclerosis, tumors,		
	B	Neuromuscular junction disorders and polyneuropathy		
	C	Motor neuron disorders and pediatric disorders		
	Mode of examination	Practical		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	Davidson's Principles and Practice of Medicine 2. Textbook of Neurology- Victor Adams 3. Brains Clinical Neurology. 4. Illustrated Neurology & Neurosurgery 5. Brains Diseases of Nervous System		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	3	3	3	3	3	3	3
CO2	2	3	2	3	3	3	3	3	3	3	3
CO3	3	3	3	3	3	3	2	3	3	3	3
CO4	3	3	3	2	3	2	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3

SEVENTH SEMESTER

School: School Of Allied Health Sciences	Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)	Current Academic Year: 2023-24
Branch: Physiotherapy	Semester: VII

1	Course Code	BPT460	
2	Course Title	PHYSIOTHERAPY IN NEUROLOGY & PSYCHOSOMATIC DISORDER	
3	Credits	5	
4	Contact Hours (L-T-P)	5-0-0	
	Course Type	DSE	
5	Course Objective	<p>1.The objective of this course in that, the student will be able to identify disability due to neurological dysfunction, set treatment goals and apply their skill.</p> <p>2. Students will understand the role exercise therapy, electrotherapy and recent therapeutic advancement in clinical situation to restore neurological function.</p> <p>3.In addition, the student will be able to diagnose the conditions.</p>	
6	Course Outcomes	<p>CO1:Be able to develop psychomotor skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to patient evaluation in order to prioritize patient's problems.</p> <p>CO2:Be able to select timely physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on the best available evidence.</p> <p>CO3:Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular.</p> <p>CO4: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.</p>	
7	Course Description	<p>The subject serves to integrate the knowledge gained by the students in neurology and neurosurgery with skills to apply these in clinical situations of dysfunction and neurological pathology. The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify disabilities due to neurological dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore neurological function.</p>	
8	Outline syllabus		CO Mapping
	Unit 1	Neurological Assessment	
	A	<p>Required materials for examination, Chief complaints, History taking–Present, Past medical, familial, personal histories, Observation, Palpation, Higher mental function– Consciousness, Orientation, Wakefulness, memory, Speech, Reading, Language, Writing, Calculations, Perception, Left right confusion, Rea</p>	CO1, CO2

	soning, and Judgment	
B	Motor Examination–Muscle power, Muscle tone, Spasticity, Flaccidity, Reflexes– Developmental reflexes, deep tendon reflexes, Superficial reflexes, Sensory examination – Superficial, Deep and Cortical sensations, Special tests– Romberg’s, Kernig’s sign, BrudzinkI sign, Tinels’s sign, Slum test, Lehermitte’s sign, Bells Phenomenon, Gower’s sign, Sunset sign, Battle’s sign, Glabellar tap sign, etc, Balance examination, coordination examination, Gait analysis–Kinetics & Kinematics (Quantitative & Qualitative analysis), Functional Analysis.	CO1, CO2
C	Assessment tools & Scales– Modified Ashworth scale, Berg balance scale, FIM, Barthel index, Glasgow coma scale, Mini mental state examination, Rancho Los Amigos Scale for Head injury, APGAR score, ASIA scale, Reflex Grading. Differential diagnosis.	CO1, CO2
Unit 2	Neurophysiological Techniques	
A	Concepts, Principles, Techniques, Effects of following Neurophysiological techniques: NDT, PNF, Vojta therapy	CO1, CO3
B	Rood’s Sensory motor Approach, Sensory Integration Approach, Brunnstorm movement therapy, Motor relearning program.	CO1, CO3
C	Contemporary task oriented approach, Muscle re-education approach and Constraint induced movement therapy.	CO1, CO3
Unit 3	Paediatric Neurology	
A	Developmental milestones, developmental reflexes, Neuro developmental screening tests. Evaluation & Management- History, Observation, Palpation, Milestone Examination, developmental reflex Examination, Higher mental function, Cranial nerve examination	CO2, CO4
B	Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis, Functional analysis, List of Problems & Complications, short & Long Term goals	CO2, CO4
C	Management of systemic complications, Management of Mechanical Complications, Use of various Neurophysiological approaches & Modalities in Risk babies, Minimum brain damage, Developmental disorders, Cerebral palsy, Autism, Down’s Syndrome, Hydrocephalus, Chorea, Spina bifida, and syringomyelia.	CO2, CO4
Unit 4	Evaluation and Management	
A	Brain and Spinal Cord Disorders: History, Observation, Palpation, Higher mental function, Cranial nerve examination, Motor & Sensory examination,	CO1, CO4

	<p>Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis, Functional analysis, List of Problems & Complications, short & Long Term goals, Management of systemic complications, Management of Mechanical Complications, Use of various Neurophysiological approaches & Modalities in Cerebrovascular Accident, Meningitis, Encephalitis, Head Injury, Brain Tumors, Perceptual disorders, Amyotrophic lateral sclerosis, and Multiple sclerosis.</p>	
B	<p>Cerebellar, Spinal Cord and Muscle Disorders : History, Observation, Palpation, Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis, Functional analysis, List of Problems & Complications, short & Long Term goals, Management of systemic complications, Management of Mechanical Complications, Use of various Neurophysiological approaches & Modalities in Ataxia, Sensory Ataxia, Parkinson's disease, Muscular dystrophy (DMD), Myasthenia Gravis, Eaton-Lambert Syndrome, Spinal tumors, Spinal cord injury, Transverse myelitis, Bladder & Bowel Dysfunction, Spinal muscular atrophies, Poliomyelitis, Post-Polio Syndrome.</p>	CO1, CO4
C	<p>1. Peripheral Nerve Injuries and Disorders : History, Observation, Palpation, Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance & Coordination examination, Gait analysis, Functional analysis, List of Problems & Complications, short & Long Term goals, Management of systemic complications, Management of Mechanical Complications, Use of various Neurophysiological approaches & Modalities in Hereditary motor sensory neuropathy, Guillain-Barre syndrome, Brachial plexus palsy, Thoracic outlet syndrome, Lumbosacral plexus lesions, Phrenic & intercostal nerve lesions, Median nerve palsy, Ulnar nerve palsy, Radial nerve palsy, Musculocutaneous nerve palsy, Anterior & Posterior interosseous nerve palsy, Axillary nerve palsy, Long thoracic nerve palsy, Suprascapular nerve palsy, sciatic nerve palsy, Tibial nerve palsy, Common peroneal nerve palsy, Femoral nerve palsy, Obturator nerve palsy, and Pudendal nerve palsy.</p>	CO1, CO4
Unit 5	Assessment and management of Neurological gaits	
A	Quantitative and Qualitative (Kinetic & Kinematics)	CO3,

	analysis, List of Problems, short & Long Term goals, Management of following Neurological Gait - Hemiplegic gait, Parkinson gait, High step gait, Hyperkinetic gait, Hypokinetic gait, Waddling gait, Scissoring gait, Spastic gait, Chorea form Gait, Diplegic Gait, and Myopathic Gait.	CO4	
B	Pre and post surgical assessment and treatment following conditions - Spinal disc herniation, Spinal stenosis, Spinal cord trauma, Head trauma, Brain tumors, Tumors of the spine, Spinal cord and peripheral nerves, Cerebral aneurysms, Subarachnoid hemorrhages, epilepsy, Parkinson's disease, Chorea, Hemiballism, Psychiatric disorders, Malformations of the nervous system, Carotid artery stenosis, Arteriovenous malformations, and Spina bifida.	CO3, CO4	
C	Applied Yoga in Neurological conditions.	CO3, CO4	
Mode of examination	Theory/Jury/Practical/Viva		
Weightage Distribution	C	MTE	ETE
	A		
	30%	20%	50%
Text book/s*	<ol style="list-style-type: none"> 1. Cash's textbook of neurology for, physiotherapists - Dowani - J P Brothers. 2. Adult Hemiplegia - Evaluation & treatment - Bobath - Oxford Butterworth Heinmann 3. Neurological Rehabilitation - Carr & Shepherd - Butterworth Heinmann 4. Tetraplegia and paraplegia - A guide for physiotherapist - Bromley Churchill Livingstone. 5. Neurological physiotherapy - A, Problem solving approach - Susan Edwards - Churchill Livingstone. 6. Neurological Rehabilitation - Urmpherd - Mosby. 7. Geriatric physical therapy - Guccione - Mosby 		
Other References	<ol style="list-style-type: none"> 8. Motor assessment of Developing Infant - Piper & Darrah - W B. Saunders. 9. Pediatric physical therapy - Teckling Lippincott 10. Treatment of cerebral Palsy and motor Delay - Levitts - Blackwell Scientific Publications, 		

		London. 11. Aging the Health care Challenge - Levis- FA Davis. Physiotherapy in Pediatrics - Shepherd - Butterworth Heinrnan	
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POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	2	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	2	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester: VII
1	Course Code	BPT 462
2	Course Title	BIostatistics & Research Methodology
3	Credits	4
4	Contact Hours (L-T-P)	4-0-0
	Course Type	SEC
5	Course Objective	1.The objective of this module is to help the students understand the basic principles of research and methods 2.Applied to draw inferences from the research findings.
6	Course Outcomes	CO1: Understand the importance of research in the relative field. Understand the basic concepts and methods of research. CO2: Interpret differences in data distributions via visual displays. Calculate standard normal scores and resulting probabilities CO3: Calculate and interpret confidence intervals for population means and proportions. Interpret and explain a p-value. CO4: Perform a two-sample t-test and interpret the results; calculate a 95% confidence interval for the difference in population means. CO5: Select an appropriate test for comparing two populations on a continuous measure, when the two sample t-test is not appropriate. CO6: Understand and interpret results from Analysis of Variance (ANOVA), a technique used to compare means amongst more than two independent populations.

7	Course Description	The objective of this module is to help the students understand the basic principles of research and methods applied to draw inferences from the research findings.
8	Outline syllabus	CO Mapping
	Unit 1	
	A	Introduction to Research methodology: Meaning of research, objectives of research, Motivation in research, Types of research & research approaches, Research methods vs methodology, Criteria for good research, Problems encountered by researchers in India.
	B	Research problem: Statement of research problem. Statement of purpose and objectives of research problem, Necessity of defining the problem.
	C	Research design: Meaning of research design, Need for research design, Features for good design, Different research designs, Basic principles of research design.
	Unit 2	
	A	Sampling Design: Criteria for selecting sampling procedure, Implications for sample design, steps in sampling design, characteristics of good sample design, Different types of sample design
	B	Measurement & scaling techniques: Measurement in research- Measurement scales, sources of error in measurement, Technique of developing measurement tools, Meaning of scaling, its classification. Important scaling techniques.
	C	Methods of data collection: collection of primary data, collection of data through questionnaires & schedules, Difference between questionnaires & schedules.
	Unit 3	
	A	Sampling fundamentals, need for sampling & some fundamental definitions, important sampling distributions.
	B	Processing & analysis of data: Processing operations, problems in processing, Types of analysis, Statistics in research, Measures of central tendency, Dispersion, Asymmetry, relationship.

C	<p>Testing of hypothesis: What is hypothesis. Basic concepts concerning testing of hypothesis, Procedure of hypothesis testing, measuring the power of hypothesis test, Tests of hypothesis, limitations of the tests of hypothesis</p> <p>Computer technology: Introduction to Computers, computer application in research, computers & researcher.</p>	CO3, CO4
Unit 4		
A	<p>Introduction: Meaning, definition, characteristics of statistics. Importance of the study of statistics, Branches of statistics, Statistics and health science including physiotherapy, Parameters and Estimates, Descriptive and inferential statistics, Variables and their types, Measurement scales.</p>	CO4, CO5
B	<p>Tabulation of Data: Basic principles of graphical representation, Types of diagrams – histograms, frequency polygons, smooth frequency polygon, cumulative frequency curve, Normal probability curve.</p>	CO4, CO5
C	<p>Measure of Central Tendency: Need for measures of central Tendency, Definition and calculation of mean – ungrouped and grouped, Meaning, interpretation and calculation of median ungrouped and grouped. Meaning and calculation of mode, Comparison of the mean, median and mode, Guidelines for the use of various measures of central tendency.</p>	CO4, CO5
Unit 5		
A	<p>Probability and Standard Distributions: Meaning of probability of standard distribution, the binomial distribution, the normal distribution, Divergence from normality – skewness, kurtosis.</p> <p>Sampling techniques: Need for sampling – Criteria for good samples, Application of sampling in community, Procedures of sampling</p>	CO5, CO6

	nd sampling design errors, Sampling variation and tests of significance.			
B	Analysis of variance & covariance: Analysis of variance (ANOVA), what is ANOVA? Basic principle of ANOVA, ANOVA technique, Analysis of Covariance (ANCOVA).			CO5, CO6
C	Format of scientific documents. (Structure of protocols, formats reporting in scientific journals, systematic reviews and meta-analysis).			CO5, CO6
Mode of examination	Theory/Jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	30%	20%	50%	
Text book/s*	7. Research Methodology- CR Kothari 8. Statistics in Medicine-Colton-Little Brown. Boston			
Other References	1. Research Methods for Clinical Therapist- Carolyn M Hicks Research in Physical Therapy-Christopher E. Bork			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	2	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	2	3	3	2	3	3	3	2
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	2	3	2	3	3	3	3	3	3	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester: VII
1	Course Code	BPT463
2	Course Title	HEALTH PROMOTION, FITNESS AND WELLNESS
3	Credits	1
4	Contact Hours (L-T-P)	1-0-0
	Course Type	AECC
5	Course Objective	<p>1.To provide understanding of personal health risks.</p> <p>2.To provide understanding of how psychological and emotional health are connected to overall well being.</p> <p>3.Health risks, screening, and assessment considering epidemiological principles are emphasized.</p> <p>4.Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.</p>
6	Course Outcomes	<p>CO1:The role of health,nutrition,physical activity and wellness in daily life.</p> <p>CO2:Awareness about how psychological and emotional health are connected to our overall well being and health.</p> <p>CO3:Able to identify personal health risks based upon current lifestyle choices</p> <p>CO4:Identify and implement lifestyle changes that will enhance lifelong health.</p> <p>CO5:Evaluation and adaptation of health behaviors and lifestyle.</p>
7	Course Description	This course includes discussion on the theories of health and wellness, including motivational theory, locus of control, public health initiative, and psycho-Social, spiritual and cultural consideration. Health risks, screening, and assessment considering epidemiological principles are emphasized. Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.
8	Outline syllabus	CO Mapping
	Unit 1	Prevention practice :a holistic perspective for physiotherapy
	A	Defining Health Predictionsof Health Care
	B	Comparing Holistic Medicine andConventional Medicine
	C	DistinguishingThreeTypesofPreventionPractic e.
	Unit 2	HealthyPeople

	A	Definition of healthy people	CO2,CO3	
	B	Health education Resources	CO1, CO3	
	C	Physiotherapist role for a healthy community.	CO2,CO3	
	Unit 3	Key concepts of fitness		
	A	Defining & Measuring Fitness b. Assessment of Stress with a Survey	CO3,CO4	
	B	Visualizing Fitness Screening for Mental and Physical Fitness	CO2,C03	
	C	Body Mass Index calculations.	CO3,C04	
	Unit 4	Fitness training		
	A	Physical Activities Readiness Questionnaire	CO5,CO1	
	B	Physical Activities Pyramid Exercise Programs	CO5,CO1	
	C	Evidence-Based Practice.	CO5,CO1	
	Unit 5	Health, fitness, and wellness		
	A	During childhood and adolescence	CO4,C05	
	B	Health, fitness, and wellness during adulthood. Women's health issues: focus on pregnancy. Health protection. Prevention practice for musculoskeletal conditions Prevention practice for cardiopulmonary conditions Prevention practice for neuromuscular conditions Prevention practice for integumentary disorders Prevention practice for individuals with developmental disabilities.	CO4,C05	
	C	Prevention practice for older adults Resources to optimize health. Marketing health and wellness.	CO4,C05	
	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References			

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	2	3	3	2	3	3	2	3	3	2
CO201.2	3	3	2	3	3	2	3	3	2	3	3
CO201.3	3	3	3	3	2	3	3	2	3	3	2
CO201.4	3	3	3	3	3	2	3	3	2	3	3
CO201.5	3	3	3	3	3	2	3	3	2	3	3

1-Slight (Low)

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

School: School of Allied Health Sciences	Batch : 2020-24
Program: Bachelor's of Physiotherap y	Current Academic Year: 2023-24
Branch: Physiotherap y	Semester: VII
1 Course Code	BPT464
2 Course Title	CLINICALCARDIOVASCULAR AND PULMONARY
3 Credits	3
4 Contact Hours (L-T-P)	3-0-0
Course Type	DSE
5 Course Objective	<ol style="list-style-type: none"> 1. The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to identify cardio respiratory dysfunction. 2. The students will be able to set treatment goals and apply their skills in exercise therapy, electrotherapy and soft tissue manipulation in clinical situation. 3. The students will be able to restore cardio respiratory function.
6 Course Outcomes	<p>The student will be able to:</p> <p>CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction</p> <p>CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions.</p> <p>CO3: To select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community.</p> <p>CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function.</p> <p>CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.</p>
7 Course Descriptio n	<p>Following the basic science and clinical science course, this course introduces the Student in cardio-thoracic conditions which commonly cause disability.</p> <p>The objective of this course is that after lectures and demonstration in addition to clinics the student will be able to demonstrate an understanding of Cardio-thoracic conditions causing disability and their management.</p> <p>Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitations imposed by cardiovascular pathology on the functioning of the individual.</p>

8	Outline syllabus	CO Mapping
	Unit 1	Anatomy and Physiology
	A	Respiratory system- Upper respiratory tract, Lower respiratory tract–Trachea, Bronchial tree, Bronchopulmonary segments Respiratory unit, hilum of lung. Muscles of respiration Pleura, intra pleural space, intrapleural pressure, surfactant
	B	Cardio vascular systems Chambers of heart, semi lunar and atrioventricular valves Coronary circulation, conductive system of heart, Cardiac cycle, ECG, Heart sounds Blood pressure, pulse, cardiac output.
	C	Mechanics of respiration – Chest wall movements, lung & chest wall compliance V/Q relationship, airway resistance Respiratory centre,
	Unit 2	Cardio Vascular system
	A	Define, etiology, pathogenesis, clinical features, complications,
	B	Conservative and surgical management of the following conditions- Ischemic heart disease Myocardial infarction Heart failure Cardiac arrest Rheumatic fever Hypertension Infective endocarditis Myocarditis & cardiomyopathy
	C	Cardiovascular Disease: Examination of the Cardiovascular System Investigations: ECG, Exercise Stress Testing, Radiology; Clinical manifestations of Cardiovascular disease; Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases and disorders of the heart: Pericarditis, Myocarditis, Endocarditis, Rheumatic Fever – resulting in valvular disorders, Ischemic Heart Disease, Coronary Valve Disease, Congenital disorders of the Heart, Cardiac Arrest; Examination and Investigations of diseases of arteries and veins ; Hypertension: Definition, causes, classification, types, assessment, investigations and management. Disorders of the Heart – Definition, Clinical features, diagnosis and choice of management for the following disorders: Congenital Heart diseases – Acyanotic congenital heart disease & Cyanotic congenital heart disease: Patent Ductus Arteriosus, Coarctation of Aorta, Atrial Septal Defect, Ventricular Septal Defect, Tetralogy of Fallot, Transposition of Great Vessels ; Acquired Heart Disease – Mitral Stenosis & Insufficiency, Aortic Stenosis and Insufficiency, Ischemic Heart Disease – Coronary Artery

	Disease, Cardiac tumors.			
Unit 3	RESPIRATORY SYSTEM			
A	Respiratory Disease: Examination of the Respiratory System – Investigations: Chest Radiographs, Pulmonary Function Testing, Arterial Blood Gas Analysis; Clinical manifestations of Lung disease		CO2, CO3	
B	Patterns of lung disease – Chronic Obstructive Lung Disease and Restrictive Lung Disease; Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following lung diseases : Chronic Bronchitis, Emphysema, Asthma, Bronchiectasis, Cystic Fibrosis, Upper Respiratory Tract Infections, Pneumonia, Tuberculosis, Fungal Diseases, Interstitial Lung Diseases, Diseases of the pleura, diaphragm and chest wall.		CO2, CO3	
C	Respiratory failure – Definition, types, causes, clinical features, diagnosis and management.		CO2, CO3	
Unit 4	Chest wall disorders			
A	Definition, Clinical features, diagnosis and choice of management for the following disorders – chest wall deformities, chest wall tumors, Spontaneous Pneumothorax, Pleural Effusion, Empyema Thoracis, Lung abscess, Bronchiectasis.		CO3, CO4	
B	Tuberculosis, Bronchogenic Carcinoma, Bronchial Adenomas, Metastatic tumors of the Lung, tracheal Stenosis, Congenital tracheomalacia		CO3, CO4	
C	Neoplasms of the trachea, Lesions of the Mediastinum. Carcinoma of the female breast.		CO3, CO4	
Unit 5	REGULATION OF RESPIRATION			
A	Neural & chemical regulation of respiration.		CO4, CO5	
B	Lung volumes and lung capacities, Spiro meter, lung function test		CO3, CO4	
C	Pulmonary circulation, Lung sounds, cough reflex.		CO3, CO4	
Mode of examination	Theory/Jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	30%	20%	50%	
Text book/s*	<ol style="list-style-type: none"> 1. Cash Textbook of general medical and surgical conditions for physiotherapists- Donnie Jaypee Brothers. 2. Essential of Cardiopulmonary physical therapy- Hillegass & Sadowsky W. B. Saunders. 3. Cash textbook of Chest, Heart and Vascular Disorders for Physiotherapists- Downie- J.P. Brothers. 4. The-Brompton Guide to Chest Physical therapy 5. Cardiopulmonary Physical Therapy- Irwin and Tecknin, Mosby. 6. Cardiovascular/Respiratory physiotherapy- Smith & Ball- Mosby 7. ACSM Guidelines for exercise testing and prescription- ACSM- Williams and Wilkins. 			
Other References	8. Chest physiotherapy in intensive care unit- Mackenzie et al - Williams and Wilkins.			

	9. Cardiopulmonary Physical Therapy- Donna Frown Feltter 10. Understanding Mechanical Ventilation- Hasan 11. Physiotherapy in respiratory Care- Hough 12. Respiratory Physiotherapy- Harden 13. Respiratory Care- Fink & Hunt	
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POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	2	3	3	3	3	2	3
CO2	3	3	3	3	2	3	3	3	3	2	3
CO3	3	3	3	3	2	3	3	3	3	2	3
CO4	3	3	3	3	2	3	3	3	3	2	3
CO5	3	3	3	3	2	3	3	3	3	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: School of allied health sciences		Batch: 2020-24
Program: Bachelor's of Physiotherapy		Current Academic Year:2023-24
Branch:Physiotherapy		Semester:VII
1	Course Code	BPT465
2	Course Title	Principles of Management, Critique inquiry, case presentation and discussion
3	Credits	1
4	Contact Hours (L-T-P)	1-0-0
	Course Type	SEC
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 organization. 4.To educate about the rules of professional conduct,code of ethics and legal ethical issues in physiotherapy and the standards of practice for physiotherapists.
6	Course Outcomes	CO1:Understand the basic issues of management and administration.

		CO2:Practice as an informed professional on legal and ethical issues in physiotherapy CO3:To understand the importance of hospital and how it works in different departments. CO4:To understand the basic principle of management and its importance CO5:To understand the role of Physiotherapy and its benefits to the society.		
7	Course Description	The course will enable the students about the rules of professional conduct, code of ethics and legal ethical issues in physiotherapy and the standards of practice for physiotherapists. It will help them to practice as an informed professional on management process and its functions.		
8	Outline syllabus			CO Mapping
	Unit 1	INTRODUCTION		
	A	Introduction to management		CO1, CO2
	B	Strategic Management		CO1, CO2
	C	Theories of management		CO1, CO2
	Unit 2	TOOLS AND TECHNIQUES OF PLANNING		
	A	Definition of Planning		
	B	Tools of planning		CO1, CO3
	C	Techniques of planning		CO1, CO3
	Unit 3	CHANGE AND INNOVATION		CO1, CO3
	A	Introduction to change and innovation		CO3, CO4
	B	Understanding Groups and Teams		CO3, CO4
	C	Managing Change and Innovation		CO3, CO4
	Unit 4	LEADERSHIP		
	A	Leadership		CO4, CO5
	B	Components of leadership		CO4, CO5
	C	Time Management		CO4, CO5
	Unit 5	COST AND EFFICIENCY		
	A	Introduction to Cost		CO1, CO5
	B	Introduction to efficiency		CO1, CO5
	C	Tools for cost and efficiency.		CO1, CO5
	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3

CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

Practical

Note: This is to be supported a **list of Practical's (As shown in template B2) in the Instructional Plan** listing the practical's which also needs to be uploaded onto LMS.

School: School Of Allied Health Sciences		Batch: 2020-24
Program: Bachelor's of physiotherapy		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester:VII
1	Course Code	BPT441
2	Course Title	Physiotherapy in Neurology & psychosomatic disorder(Practical)
3	Credits	2
4	Contact Hours (L-T-P)	0-0-4
	Course Status	CC
5	Course Objective	<p>1.The objective of this course in that, the student will be able to identify disability due to neurological dysfunction, set treatment goals and apply their skill.</p> <p>2. Students will understand the role exercise therapy, electrotherapy and recent therapeutic advancement in clinical situation to restore neurological function.</p> <p>3.In addition, the student will be able to diagnose the conditions.</p>
6	Course Outcomes	<p>CO1:Be able to develop psychomotor skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to patient evaluation in order to prioritize patient's problems.</p> <p>CO2:Be able to select timely physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on the best available evidence.</p> <p>CO3:Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular.</p> <p>CO4: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.</p>
7	Course	The subject serves to integrate the knowledge gained by the students

	Description	in neurology and neurosurgery with skills to apply these in clinical situations of dysfunction and neurological pathology. The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify disabilities due to neurological dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore neurological function.		
8	Outline syllabus	CO Mapping		
	Unit 1	NEUROLOGICAL ASSESSMENT		
		4. Brief 5. Demonstration. 6. Assessment tools & scales.		CO1, CO2
	Unit 2	NEURO PHYSIOLOGICAL TECHNIQUES		
		4. Rood's Sensory motor approach 5. Sensory Integration Approach 6. Brunnstorm Motor Therapy 7. Motor Re-learning Programme.		CO1, CO3
	Unit 3	Paediatric Neurology		
		4. Brief about paediatric assessment. 5. Examination 6. Management		CO2,CO4
	Unit 4	Evaluation & Management		
		4. Brief about assessment in neurological conditions. 5. Cranial nerve examination, motor and sensory examination. 6. Management of neurological conditions.		CO1,CO4
	Unit 5	NEUROLOGICAL GAITS & APPLIED YOGA IN NEUROLOGICAL CONDITIONS		
		4. Quantitative & qualitative analysis of gait. 5. Pre & post surgical assessment and treatment of neurological conditions. 6. Applied yoga in neurological conditions.		CO3,CO4
	Mode of examination	Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	1. Cash's textbook of neurology for, physiotherapists - Dowani - J P Brothers. 2. Adult Hemiplegia - Evaluation & treatment - Bobath - Oxford ButterworthHeinm an 3. Neurological Rehabilitation - Carr&Shepherd - ButterworthHeinrnan 4. Tetraplegia and paraplegia - A guide for		

		physiotherapist- BromleyChurchill Livingstone. 5. Neurological physiotherapy - A, Problem solving approach – Susan Edwards- Churchill Linvigstone. 6. Neurological Rehabilitation - Urmpherd - Mosby. 7. Geriatric physical therapy- Gucciona- Mosby	
	Other References	8. Motor assessment of Developing Infant - Piper & Darrah - W B. Saunders. 9. Pediatric physical therapy- Teckling Lippincott 10. Treatment of cerebral Palsy and motor Delay - Levitts- Blackwell Scientific Publications, London. 11. Aging the Health care Challenge - Levis- FA Davis. 12. Physiotherapy in Pediatrics - Shepherd - Butterworth Heinrnan	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	2	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	2	3	3	3	3	3

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester: VII
1	Course Code	BPT442
2	Course Title	HEALTH PROMOTION, FITNESS AND WELLNESS (PRACTICAL)
3	Credits	1
4	Contact Hours (L-T-P)	0-0-2
	Course Type	PRACTICAL
5	Course Objective	1.To provide understanding of personal health risks.

		<p>2.To provide understanding of how psychological and emotional health are connected to overall well being.</p> <p>3.Health risks, screening, and assessment considering epidemiological principles are emphasized.</p> <p>4.Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.</p>	
6	Course Outcomes	<p>CO1:The role of health,nutrition,physical activity and wellness in daily life.</p> <p>CO2:Awareness about how psychological and emotional health are connected to our overall well being and health.</p> <p>CO3:Able to identify personal health risks based upon current lifestyle choices</p> <p>CO4:Identify and implement lifestyle changes that will enhance lifelong health.</p> <p>CO5:Evaluation and adaptation of health behaviors and lifestyle.</p>	
7	Course Description	<p>This course includes discussion on the theories of health and wellness, including motivational theory, locus of control, public health initiative, and psycho-Social, spiritual and cultural consideration. Health risks, screening, and assessment considering epidemiological principles are emphasized. Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.</p>	
8	Outline syllabus	CO Mapping	
	Unit 1	Prevention practice :a holistic perspective for physiotherapy	
		Brief. Demonstration. Experimentation.	CO1,CO2
	Unit 2	HealthyPeople	
		Brief Demonstration Experimentation	CO2,C03
	Unit 3	Fitness	
		<p>4. Defining & Measuring Fitness</p> <p>b.Assessmentof Stresswith a Survey</p> <p>5. Visualizing Fitness, Screening for Mental and Physical Fitness</p> <p>6. Body Mass Index calculations.</p>	CO3,C04
	Unit 4	Fitnesstraining	
		<p>1. Physical Activities Readiness Questionnaire</p> <p>2. Physical Activities Pyramid</p> <p>3. Exercise Programs, Evidence-Based Practice</p>	CO4,CO5

	Unit 5	Health, fitness, and wellness		
		Brief Demonstration Experimentation		CO1,CO5
Mode of examination	Jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	60%	0%	40%	

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3

School: School of allied health sciences	Batch: 2020-24
Program: Bachelor's of Physiotherapy	Current Academic Year: 2023-24
Branch: Physiotherapy	Semester: VII
1 Course Code	BPT443
2 Course Title	CLINICAL CARDIOVASCULAR AND PULMONARY (PRACTICAL)
3 Credits	1
4 Contact Hours (L-T-P)	0-0-2
Course Status	DSE
5 Course Objective	<ol style="list-style-type: none"> The objective of this course is that after lectures, demonstrations, practical and clinics the student will be able to identify cardio respiratory dysfunction. The students will be able to set treatment goals and apply their skills in exercise therapy, electrotherapy and soft tissue manipulation in clinical situation. The students will be able to restore cardio respiratory function.
6 Course Outcomes	<p>The student will be able to:</p> <p>CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction</p>

		<p>CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions.</p> <p>CO3: To select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community.</p> <p>CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function.</p> <p>CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.</p>
7	Course Description	<p>Following the basic science and clinical science course, this course introduces the Student in cardio-thoracic conditions which commonly cause disability.</p> <p>The objective of this course is that after lectures and demonstration in addition to clinics the student will be able to demonstrate an understanding of Cardio-thoracic conditions causing disability and their management.</p> <p>Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitations imposed by cardiovascular pathology on the functioning of the individual.</p>
8	Outline syllabus	CO Mapping
	Unit 1	Cardiopulmonary Assessment
		<ol style="list-style-type: none"> 1. Brief 2. Demonstration 3. Assessment tools and techniques, outcome measures.
		CO1, CO2
	Unit 2	Physiotherapy Techniques
		<ol style="list-style-type: none"> 1. Brief, demonstration 2. Drug therapy 3. Neonatal techniques
		CO2, CO3
	Unit 3	Pulmonary Rehabilitation
		<ol style="list-style-type: none"> 1. Brief 2. Demonstration 3. Experimentation
		CO3, CO4
	Unit 4	Physiotherapy following lung surgeries
		<ol style="list-style-type: none"> 1. Brief 2. Rehabilitation Protocol 3. Techniques
		CO1, CO2
	Unit 5	Abdominal surgeries & amputation
		<ol style="list-style-type: none"> 1. Brief 2. Rehabilitation Protocol 3. Techniques
		CO1, CO5
	Mode of	Practical/Viva

	examination			
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	1. Cash Textbook of general medical and surgical conditions for physiotherapists- Donnie Jaypee Brothers. 2. Essential of Cariopulmonary physical therapy- Hillegass & Sadowsky W. B. Saunders. 3. Cash textbook of Chest, Heart and Vascular Disorders for Physiotherapists- Downie- J.P. Brothers. 4. The-Brompton Guide to Chest Physical therapy 5. Cardiopulmonary Physical Therapy- Irwin and Tecknin, Mosby. 6. Cardiovascular/Respiratory physiotherapy- Smith & Ball- Mosby 7. ACSM Guidelines for exercise testing and prescription- ACSM- Williams and Wilkins.		
	Other references	8. Chest physiotherapy in intensive care unit- Mackenzie et al - Williams and Wilkins. 9. Cardiopulmonary Physical Therapy- Donna Frown Feltter 10. Understanding Mechanical Ventilation- Hasan 11. Physiotherapy in respiratory Care- Hough 12. Respiratory Physiotherapy- Harden 13. Respiratory Care- Fink & Hunt		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	2	3	3	3	3	2	3
CO2	3	3	3	3	2	3	3	3	3	2	3
CO3	3	3	3	3	2	3	3	3	3	2	3
CO4	3	3	3	3	2	3	3	3	3	2	3
CO5	3	3	3	3	2	3	3	3	3	2	3

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester:VII
1	Course Code	BPT444
2	Course Title	CLINICAL EDUCATION

3	Credits	6
4	Contact Hours (L-T-P)	0-0-12
	Course Type	CLINICAL PRACTICE
5	Course Objective	<ol style="list-style-type: none"> 1. Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. 2. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.
6	Course Outcomes	<p>CO1: To be able to apply the gained knowledge in clinical setup.</p> <p>CO2: Develop critically, strategically and in depth a topic or area of interest arising from the work done within the taught graduate framework and in student's area of academic or professional interest.</p> <p>CO3: To be able to utilize the gained knowledge practically and in hospital setup.</p> <p>CO4: Present and be able to utilize their rationale, approach or methodology, outcomes and conclusions.</p> <p>CO5: To be able to enhance practical knowledge, professional approach, academic rigour, independence and self direction.</p>
7	Course Description	Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.
8	Outline syllabus	CO Mapping
	Unit 1	Musculoskeletal physiotherapy
		Brief. Demonstration. Experimentation.
		CO1, CO2
	Unit 2	Cardio pulmonary physiotherapy
		Brief Demonstration Experimentation
		CO2, CO3
	Unit 3	Electrotherapy
		Brief Demonstration able to utilize modalities
		CO3, CO4
	Unit 4	Exercise Therapy
		Brief Demonstration application
		CO4, CO5
	Unit 5	Intensive care units and IPD

	Brief Demonstration Assessment and application	CO1,CO5
Mode of examination	Jury/Practical/Viva	
Weightage Distribution	CA	MTE
	100%	0%
	ETE	0%

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3

SEMESTER VIII

School: School Of Allied Health Sciences		Batch: 2020-24
Program: Bachelor's of physiotherapy		Current Academic Year:2023-24
Branch:Physiotherapy		Semester:VIII
1	Course Code	BPT466
2	Course Title	PHYSIOTHERAPY INCARDIO-VASCULARPULMONARY AND INTENSIVE CARE
3	Credits	5
4	Contact Hours (L-T-P)	5-0-0
	Course Type	SEC
5	Course Objective	<ol style="list-style-type: none"> 1. To provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. 2. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs. 3. Student must know emergency drugs indication and contra-indication, care in intensive care unit (ICU) and to provide appropriate interventions to the patient.
6	Course Outcomes	<p>CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction</p> <p>CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions.</p> <p>CO3: To select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community.</p> <p>CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function.</p> <p>CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.</p>

7	Course Description	The subject is designed to provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs, student must know emergency drugs indication and contra-indication, care in intensive care unit (ICU) and to provide appropriate interventions to the patient.	
8	Outline syllabus		CO Mapping
	Unit 1	ASSESSMENT	
	A	Anatomical and Physiological differences between the Adult and Pediatric lung. Bedside assessment of the patient-Adult & Pediatric. Cardiac Rehabilitation., Physiotherapy management following PVD.	CO1, CO2
	B	Investigations and tests Exercise tolerance Testing – Cardiac & Pulmonary, Radiographs, PFT, ABG, ECG, Hematological and Biochemical Tests.	CO2, CO3,
	C	Physiotherapy techniques to increase lung volume – controlled mobilization, positioning, breathing exercises, Neurophysiological Facilitation of Respiration,	CO3, CO4
	Unit 2	Physiotherapy Techniques	
	A	Physiotherapy techniques to decrease the work of breathing – Measure to optimize the balance between energy supply and demand, positioning, Breathing re-education – Breathing control techniques, mechanical aids – IPPB, CPAP, BiPAP. Physiotherapy techniques to clear secretions – Hydration, Humidification & Nebulisation, Mobilisation and Breathing exercises, Postural Drainage, Manual techniques – Percussion, Vibration and Shaking, Rib Springing, ACBT, Autogenic Drainage, Mechanical Aids – PEP, Flutter, IPPB, Facilitation of Cough and Huff, Nasopharyngeal Suctioning.	CO4, CO5
	B	Drug therapy – Drug to prevent and treat inflammation, Drug to treat Bronchospasm, Drugs to treat Breathlessness, Drug to help sputum clearance, Drug to inhibit coughing, Drug to improve ventilation, Drug to reduce pulmonary hypertension, Drug delivery doses, Inhalers and Nebulisers.	CO1, CO3
	C	Neonatal and Pediatric Physiotherapy – Chest physiotherapy for children, The neonatal unit, Modifications of chest physiotherapy for specific neonatal disorders, Emergencies in the neonatal unit.	CO1, CO2
	Unit 3	PULMONARY REHABILITATION	
	A	Physiotherapy in Obstructive lung conditions, Physiotherapy in Restrictive lung conditions.	CO3, CO4
	B	Management of breathlessness.	
	C	Pulmonary Rehabilitation.	CO4, CO5
	Unit 4	PHYSIOTHERAPY FOLLOWING LUNG SURGERIES.	
	A	Physiotherapy following Lung surgeries	CO1,

		Respiratory failure–Oxygen Therapy and Mechanical Ventilation.			CO2
B		Introduction to ICU: ICU monitoring– Apparatus, Airways and Tubes used in the ICU– Physiotherapy in the ICU– Common conditions in the ICU– Tetanus, Head Injury, Lung Disease, Pulmonary Oedema, Multiple Organ Failure, Neuromuscular Disease, Smoke Inhalation, Poisoning, Aspiration, Near Drowning, ARDS, Shock; Dealing with an Emergency Situation in the ICU.			CO2, CO3,
C		Physiotherapy management following cardiac surgeries.			CO3, CO4
Unit 5		ABDOMINAL SURGERIES & AMPUTATION			
A		Abdominal Surgeries- Management of Pulmonary Restorative Dysfunction following surgical procedures on Abdomen and Thorax.			CO4, CO5
B		Management of Amputations following Diabetes, PVD- Prosthesis in amputations of lower limbs following ulcers and gangrenes.			CO1, CO3
C		Home program and education of family members in patient care. Treatment, Response to exercise and Implications of Physiotherapy in the following disease conditions: Hypertension, Diabetes, Renal Failure and Obesity.			CO1, CO2
Mode of examination		Theory/jury/Practical/Viva			
Weightage Distribution	CA	MTE	ETE		
	30%	20%	50%		
Text book/s*	<ol style="list-style-type: none"> 1. Cash Textbook of general medical and surgical conditions for physiotherapists- Donnie Jaypee Brothers. 2. Essential of Cariopulmonary physical therapy- Hillegass & Sadowsky W. B. Saunders. 3. Cash textbook of Chest, Heart and Vascular Disorders for Physiotherapists- Downie- J.P. Brothers. 4. The-Brompton Guide to Chest Physical therapy 5. Cardiopulmonary Physical Therapy- Irwin and Tecknin, Mosby. 6. Cardiovascular/Respiratory physiotherapy- Smith & Ball- Mosby 7. ACSM Guidelines for exercise testing and prescription- ACSM- Williams and Wilkins. 8. Chest physiotherapy in intensive care unit- Mackenzie et al - Williams and Wilkins. 9. Cardiopulmonary Physical Therapy- Donna Frown Feltter 10. Understanding Mechanical Ventilation- Hasan 11. Physiotherapy in respiratory Care- Hough 12. Respiratory Physiotherapy- Harden 13. Respiratory Care- Fink & Hunt 				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3

CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3

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

Practical

Note: This is to be supported a **list of Practical's (As shown in template B2) in the Instructional Plan** listing the practical's which also needs to be uploaded onto LMS.

School: School of allied health sciences		Batch: 2020-24
Program: Bachelor's of Physiotherapy		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester: VIII
1	Course Code	BPT444
2	Course Title	PHYSIOTHERAPY INCARDIO-VASCULARPULMONARY AND INTENSIVE CARE(PRACTICAL)
3	Credits	2
4	Contact Hours (L-T-P)	0-0-4
Course Status		Compulsory/Elective
5	Course Objective	<p>1. To provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions.</p> <p>2. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs.</p> <p>3. Student must know emergency drugs indication and contra-indication, care in intensive care unit (ICU) and to provide appropriate interventions to the patient.</p>
6	Course Outcomes	<p>CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction</p> <p>CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions.</p> <p>CO3: To select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community.</p> <p>CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function.</p> <p>CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.</p>
7	Course Description	The subject is designed to provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs, student must know emergency drugs indication and contra-indication, care in intensive care unit (ICU) and to provide appropriate

		interventions to the patient.		
8	Outline syllabus			CO Mapping
	Unit 1	Cardiopulmonary Assessment		
		4. Brief 5. Demonstration 6. Assessment tools and techniques, outcome measures.		CO1, CO2
	Unit 2	Physiotherapy Techniques		
		4. Brief, demonstration 5. Drug therapy 6. Neonatal techniques		CO3, CO4
	Unit 3	Pulmonary Rehabilitation		
		4. Brief 5. Demonstration 6. Experimentation		CO4, CO5
	Unit 4	Physiotherapy following lung surgeries		
		4. Brief 5. Rehabilitation Protocol 6. Techniques		CO1, CO2
	Unit 5	Abdominal surgeries & amputation		
		4. Brief 5. Rehabilitation Protocol 6. Techniques		CO3, CO5
	Mode of examination	Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	-1. Cash Textbook of general medical and surgical conditions for physiotherapists- Donnie Jaypee Brothers. 2. Essential of Cariopulmonary physical therapy- Hillegass & Sadowsky W. B. Saunders. 3. Cash textbook of Chest, Heart and Vascular Disorders for Physiotherapists- Downie- J.P. Brothers. 4. The-Brompton Guide to Chest Physical therapy 5. Cardiopulmonary Physical Therapy- Irwin and Tecknin, Mosby. 6. Cardiovascular/Respiratory physiotherapy- Smith & Ball- Mosby 7. ACSM Guidelines for exercise testing and prescription- ACSM- Williams and Wilkins.		

		8. Chest physiotherapy in intensive care unit- Mackenzie et al - Williams and Wilkins. 9. Cardiopulmonary Physical Therapy- Donna Frown Feltter 10. Understanding Mechanical Ventilation- Hasan 11. Physiotherapy in respiratory Care- Hough 12. Respiratory Physiotherapy- Harden 13. Respiratory Care- Fink & Hunt	

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3

1-Slight (Low)

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

School: School of allied health sciences	Batch : 2020-24
Program : Bachelor's of physiotherapy	Current Academic Year: 2023-24
Branch: Physiotherapy	Semester: VIII
1 Course Code	BPT467
2 Course Title	Community Physiotherapy
3 Credits	4
4 Contact Hours	4-0-0

(L-T-P)		
Course Type	AECC	
5 Course Objective	1.Students will be able apply knowledge in community medicine and other areas with skills to apply these in clinical situation. 2.Students will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions. 3.To plan treatment goals and applytheskills gained in rehabilitating and restoring functions.	
6 Course Outcomes	CO1:To understand the team approach in rehabilitation of disability. To understand the role of community and other institutions for rehabilitation. CO2:Identification of residual potentials in patients with partial or total disability (temporary or permanent). Formulation of appropriate goals (long & short term) in treatment & rehabilitation will be discussed. CO3:Application of various orthosis, prosthesis, wheelchairs and other assistive devices for different medical and Physical conditions. CO4:To understand the importance of administration in setting of department. CO5:To understand the organizational structure of a department or an organization.	
7 Course Description	The subject serves to integrate the knowledge gained by the students in community medicine and other areas with skills to apply these in clinical situations of health and disease and its prevention.The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions dueto various disease conditions and plan and set treatment goals and applytheskills gained in rehabilitating and restoring functions.	
8 Outline syllabus		CO Mapping
Unit 1	Community Rehabilitation	
A	Defination and definition of Community, Multiplicity of Communities. The Community based approach, Community Entry strategies.	CO1, CO2
B	Types and CBR and Community development, Community initiated versus community oriented programme.	CO1, CO2
C	Brief description and Community participation and mobilization	CO1, CO2
Unit 2	Introduction and Principles to Community Based Rehabilitation	
A	Definition, Historical review, Concept of CBR, Need for CBRW.H.O.`s policies-about rural health care- concept of primary/tertiary health centers-district hospitals etc-Role of P.T.- Principles of a team work of Medical person/P.T./O.T.	CO1, CO3
B	Difference between Institution based and Community based Rehabilitation and Audiologist/speech therapist/P.&O./vocational guide in C.B.R of physically handicapped person Agencies involved in rehabilitation of physical handicapped-Legislation for physically handicapped	CO1, CO3
C	Objectives of CBR, Scope of CBR, Members of CBR team, Models of CBR and Concept of multi purpose health worker. Role of family members in the rehabilitation of a physically handicapped.	CO1, CO3
Unit 3	Planning and management of CBR Programmes, Disability and Disability Evaluation	
A	Planning and management of CBR Programmes, CBR Programmed planning and management, Ownership and Governance, Decentralization and CBR, Management of CBR, Programmed sustainability, Communication and Coordination, Community participation,	CO2, CO4

	mobilization and awareness, CBR programme influence on promoting and developing public policies.	
B	Disability: Definition of Impairment, Handicap and Disability, Difference between impairment, handicap and disability, Causes of disability, Types of disability, Prevention of disability, Disability in developed countries, Disability in developing countries. Disability Surveys: Demography. Screening: Early detection of disabilities and developmental disorders, Prevention of disabilities- Types and levels.	CO2, CO4
C	Disability Evaluation: Introduction, What, Why and How to evaluate, Quantitative versus Qualitative data, Uses of evaluation findings.	CO2, CO4
Unit 4	Role of Government in CBR	
A	Role of Government in CBR: Laws, Policies, Programmes, Human Rights Policy, Present rehabilitation services, Legal aspects of rehabilitation. Role of Social work in CBR: Definition of social work, Methods of social work, History of social work, Role of social worker in rehabilitation. Role of voluntary Organizations in CBR: Charitable Organizations, Voluntary health agencies – National level and International NGO's, Multilateral and Bilateral agencies.	CO3, CO4
B	National District Level Rehabilitation Programme: Primary rehabilitation unit, Regional training center, District rehabilitation center, Primary Health center, Village rehabilitation worker, Anganwadi worker	CO3, CO4
C	International Health Organizations: WHO, UNICEF, UNDP, UNFPA, FAO, ILO, Worldbank, USAID, SIDA, DANIDA, Rockefeller, Ford foundation, CARE, RED CROSS	CO3, CO4
Unit 5	Role of Physiotherapy in CBR and Role of Physiotherapy in CBR	
A	1. Role of Physiotherapy in CBR: Screening for disabilities, Prescribing exercise programme, Prescribing and devising low cost locally available assistive aids, Modifications physical and architectural barriers for disabled, Disability prevention, Strategies to improve ADL, Rehabilitation programmes for various neuro-musculoskeletal and cardiothoracic disabilities. 2. Screening and rehabilitation of paediatric disorders in the community: Early detection of high risk babies, Maternal nutrition and education, Rehabilitation of Cerebral Palsy, Polio, Downs Syndrome, Muscular Dystrophies etc., Prevention and rehabilitation of mental retardation and Behavioural disorders, Immunization programmes, Early intervention in high risk babies, Genetic counselling.	CO4, CO5
B	3. Extension services and mobile units: Introduction, Need, Camp approach. 4. Vocational training in rehabilitation: Introduction, Need, Vocational evaluation, Vocational rehabilitation services. 5. Geriatrics-Physiology of Aging/degenerative changes- Musculoskeletal/Neuromotor/cardio-respiratory-/Metabolic, Endocrine, Cognitive, Immune systems. Role of Physiotherapy in Hospital based care, Half-way homes, Residential homes, Meal on wheel etc. Home for the aged, Institution based Geriatric Rehabilitation. Few conditions: -Alzheimer's disease, Dementia, Parkinson's Disease, Incontinence, Iatrogenic drug reactions, etc. Ethics of Geriatric Rehabilitation.	CO4, CO5
C	Role of Physiotherapy in CBR -Occupational Hazards in the industrial area-- Accidents due to a. Physical agents-e.g.-Heat/cold, light, noise, Vibration, U.V. radiation, Ionizing radiation, b. Chemical agents-Inhalation, local action, ingestion, c. Mechanical hazards-	CO4, CO5

		<p>overuse/fatigueinjuriesduetoergonomicalteration&ergonomic evaluation ofwork place-mechanical stresses per hierarchy–</p> <ol style="list-style-type: none"> i. sedentary table work–executives, clerk, ii. inappropriate seating arrangement- vehicle drivers iii. constant standing- watchman-Defense forces, surgeons, iv. Over-exertion in laborers,-common accidents – of P.T.-Stress Role management. <p>d. Psychologicalhazards-e.g.- executives,monotonicity&dissatisfactioninjob,anxietyof workcompletionwithquality,RoleofP.T.inIndustrialsetup&Stressmanagemen- relaxation modes.</p> <p>e. Biological Hazards</p>	
Mode of examination	Theory/Jury/Practical/Viva		
Weigh tage Distri bution	CA	MTE	ETE
	30%	20%	50%
Text book/s *	<p>-Physical rehabilitation-assessment & treatment- Sullivan</p> <p>-Krusen’s handbook of PMR- Kottke & lehman-W.B Saunders</p> <p>-Orthotics in Rehabilitation-splinting the limb & body- Mckee and Morgan- FA Davis</p>		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3

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

Practical

Note: This is to be supported a **list of Practical's (As shown in template B2) in the Instructional Plan** listing the practical's which also needs to be uploaded onto LMS.

School: School of allied health sciences		Batch: 2020-24	
Program: Bachelor's of physiotherapy		Current Academic Year: 2023-24	
Branch: Physiotherapy		Semester: VIII	
1	Course Code	BPT445	
2	Course Title	COMMUNITY PHYSIOTHERAPY(PRACTICAL)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Status	Compulsory/Elective	
5	Course Objective	1.Students will be able apply knowledge in community medicine and other areas with skills to apply these in clinical situation. 2.Students will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions. 3.To plan treatment goals and applytheskills gained in rehabilitating and restoring functions.	
6	Course Outcomes	CO1:To understand the team approach in rehabilitation of disability. To understand the role of community and other institutions for rehabilitation. CO2:Identification of residual potentials in patients with partial or total disability (temporary or permanent). Formulation of appropriate goals (long & short term) in treatment & rehabilitation will be discussed. CO3:Application of various orthosis, prosthesis, wheelchairs and other assistive devices for different medical and Physical conditions. CO4:To understand the importance of administration in setting of department. CO5:To understand the organizational structure of a department or an organization.	
7	Course Description	The subject serves to integrate the knowledge gained by the students in community medicine and other areas with skills to apply these in clinical situations of health and disease and its prevention.The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions dueto various disease conditions and plan and set treatment goals and applytheskills gained in rehabilitating and restoring functions.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction of community physiotherapy	
		-Brief -Demonstration -Community visit	CO1,CO2
	Unit 2	Enviornment and health	
		-Brief	CO2,C03

		-Demonstration -Community visit		
	Unit 3	Disability and disability evaluation		
		-Brief -Institutional visit to PMR department -Demonstration	CO3,C04	
	Unit 4	Health problems & vulnerable groups		
		-brief -in rural areas to conduct survey of population requiring physiotherapy services & treatments. -demonstration	CO2,CO4	
	Unit 5	Orthotics & Prosthetics		
		-brief -demonstration -Experimentation	CO4,CO5	
	Mode of examination	Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		60%	0%	40%
	Text book/s*	-Textbook of preventive and social medicine by Dr. J.E Park -Physical rehabilitation-assessment & treatment-Sullivan -Krusen's handbook of PMR- Kottke & lehman-W.B Saunders -Orthotics in Rehabilitation-splinting the limb & body- Mckee and Morgan- FA Davis		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3

School:	Batch : 2020-24
Program:	Current Academic Year: 2023-24
Branch:	Semester:
1 Course Code	BPT468
2 Course Title	CLINICALREASONING AND EVIDENCE BASED PHYSIOTHERAPYPRACTICE
3 Credits	1

4	Contact Hours (L-T-P)	1-0-0	
	Course Type	DSE	
5	Course Objective	1. To understand the need of evidence based practice. 2.To apply evidence based practice in clinical setup. 3.To know recent trend and advanced treatment in physiotherapy. 4.To know the need of evidence based practice	
6	Course Outcomes	CO1:The students will be able to find recent trends in physiotherapy. CO2:The students will be able to apply recent techniques & trends in assessment and treatment protocols. CO3:The students will be able to find researches and technology to advance the studies. CO4:The students will be able to upgrade themselves with recent advancements and develop clinical reasoning.	
7	Course Description	The course is related to clinical reasoning and evidence based practice. It utilizes evidence based practice in physiotherapy.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction to evidence based practice	
	A	Introduction to Evidence Based Practice: Definitions, Evidence Based Practice	CO1, CO2
	B	Concepts of Evidence based Physiotherapy: Awareness, Consultation, Judgement, and Creativity	CO1, CO2
	C	Development of Evidence based knowledge, The Individual Professional within a discipline, and Professionals across disciplines	CO1, CO2
	Unit 2	Evidence based practitioners	
	A	Evidence Based Practitioner: The Reflective Practitioner, The EM Model, Using the EM Model	CO1, CO3
	B	Finding the Evidence: Measuring outcomes in Evidence Based Practice, Measuring Health Outcomes, Measuring clinical outcomes, Inferential statistics and Causation	CO1, CO3
	C	Searching for the Evidence: Asking Questions, Identifying different sources of evidence, Electronic Bibliographic databases and World Wide Web, Conducting a literature research. Step by- step search for evidence	CO1, CO3
	Unit 3	Assessing the evidence	
	A	Assessing the Evidence: Evaluating the evidence; Levels of evidence in research using quantitative methods, Levels of evidence classification system, Outcome Measurement,	CO2, CO3
	B	Biostatistics, The critical review of research using qualitative methods.	CO2, CO3
	C	Systematically reviewing the evidence: Stages of systematic reviews, Meta-analysis, The Cochrane collaboration	CO2, CO3
	Unit 4	Economic evaluation of evidence	

A	Economic evaluation of the evidence: Types of economic evaluation, conducting economic evaluation, critically reviewing economic evaluation, locating economic evaluation in the literature	CO1, CO3	
B	Using the evidence: Building evidence in practice; Critically Appraised Topics (CATs), CAT format, Using CATs, Drawbacks of CATs	CO1, CO3	
C	Practice guidelines, algorithms, and clinical pathways: Recent trends in healthcare, Clinical Practice Guidelines (CPG), Algorithms, Clinical pathways, Legal implications in clinical pathways and CPG, Comparison of CPGs, Algorithms and Clinical Pathways	CO1, CO3	
Unit 5	Communicating evidence to clients, managers and funders		
A	Communicating evidence to clients, managers and funders: Effectively communicating evidence, Evidence based communication in the face of uncertainty; Evidence based communication opportunities in everyday practice	CO3, CO4	
B	Research dissemination and transfer of knowledge: Models of research transfer, Concrete research transfer strategies	CO3, CO4	
C	Evidence based policy	CO3, CO4	
Mode of examination	Theory/Jury		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. APTA journal 2. International journal of physiotherapy		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

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

PRACTICAL

School:	Batch : 2020-24
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Program:		Current Academic Year: 2023-24	
Branch:		Semester: VIII	
1	Course Code	BPT446	
2	Course Title	CLINICAL REASONING AND EVIDENCE BASED PHYSIOTHERAPY PRACTICE	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-1	
	Course Type	Practical	
5	Course Objective	1. To understand the need of evidence based practice. 2. To apply evidence based practice in clinical setup. 3. To know recent trend and advanced treatment in physiotherapy. 4. To know the need of evidence based practice	
6	Course Outcomes	CO1: The students will be able to find recent trends in physiotherapy. CO2: The students will be able to apply recent techniques & trends in assessment and treatment protocols. CO3: The students will be able to find researches and technology to advance the studies. CO4: The students will be able to upgrade themselves with recent advancements and develop clinical reasoning.	
7	Course Description	The course is related to clinical reasoning and evidence based practice. It utilizes evidence based practice in physiotherapy.	
8	Outline syllabus		CO Mapping
	Unit 1	Introduction to evidence based practice	
		Introduction to Evidence Based Practice: Definitions, Evidence Based Practice	CO1, CO2
		Concepts of Evidence based Physiotherapy: Awareness, Consultation, Judgement, and Creativity	
		Development of Evidence based knowledge, The Individual Professional within a discipline, and Professionals across disciplines	
	Unit 2	Evidence based practitioners	
		Evidence Based Practitioner: The Reflective Practitioner, The EM Model, Using the EM Model	CO1, CO3
		Finding the Evidence: Measuring outcomes in Evidence Based Practice, Measuring Health Outcomes, Measuring clinical outcomes, Inferential statistics and Causation	
		Searching for the Evidence: Asking Questions, Identifying different sources, Electronic Bibliographic databases and World Wide Web, Conducting a literature search Step by- step search for evidence	
	Unit 3	Assessing the evidence	
		Assessing the Evidence: Evaluating the evidence; Levels of evidence in research using quantitative methods, Levels of evidence classification system, Outcome Measurement,	CO2, CO3
		Biostatistics, The critical review of research using qualitative methods.	

		Systematically reviewing the evidence: Stages of systematic reviews, Meta-analysis, The Cochrane collaboration			
Unit 4	Economic evaluation of evidence				CO1,C O3
	Economic evaluation of the evidence: Types of economic evaluation, conducting economic evaluation, critically reviewing economic evaluation, locating economic evaluation in the literature				
	Using the evidence: Building evidence in practice; Critically Appraised Topics (CATs), CAT format, Using CATs, Drawbacks of CATs				
	Practice guidelines, algorithms, and clinical pathways: Recent trends in healthcare, Clinical Practice Guidelines (CPG), Algorithms, Clinical pathways, Legal implications in clinical pathways and CPG, Comparison of CPGs, Algorithms and Clinical Pathways				
Unit 5	Communicating evidence to clients, managers and funders				CO3,C O4
	Communicating evidence to clients, managers and funders: Effectively communicating evidence, Evidence based communication in the face of uncertainty; Evidence based communication opportunities in everyday practice				
	Research dissemination and transfer of knowledge: Models of research transfer, Concrete research transfer strategies				
	Evidence based policy				
Mode of examination	Practical/viva				
Weightage Distribution	CA	MTE	ETE		
	60%	0%	40%		
Text book/s*	3. APTA journal 4. International journal of physiotherapy				

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

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

School: School of Allied Health Sciences	Batch : 2020-24	
Program: Bachelor's of physiotherapy	Current Academic Year: 2023-24	
Branch: Physiotherapy	Semester: VIII	
1 Course Code	BPT469	
2 Course Title	ADMINISTRATION & TEACHING SKILLS	
3 Credits	1	
4 Contact Hours (L-T-P)	1-0-0	
Course Type	CC	
5 Course Objective	1.To understand management ,administration and organization. 2.To understand ethics of physiotherapist and various theories of management and administration.To educate the students about concept of teaching and learning. 3.To educate them to learn about philosophies of education 4.To provide knowledge about curriculum,techniques and methods of teaching.	
6 Course Outcomes	CO1:Understand the role of administration and management. CO2:To know the use of various teaching aids. CO3:To know the role of employee and ethics of physiotherapist. CO4:Learn method and techniques of teaching. CO5:To understand financial issues faced in an organization and to understand the rules of an organization.	
7 Course Description	This course presents knowledge and application of different teaching methodology to the students. The course begins with core topics of concepts of teaching and learning. The course also covers administration and management and role of physiotherapist in organization.	
8 Outline syllabus		CO Mapping
Unit 1	Introduction to administration	
A	Branchesofadministration,Natureandscopeofadministration.	CO1, CO2
B	How to be an effective administrator.	CO1, CO2
C	Planninghospitaladministrationas part ofabalancedhealthcareprogram.	CO1, CO2
Unit 2	Introduction to management	
A	Principlesof hospital administration and itsapplicationsto physiotherapy.	CO2,CO3
B	Planningandorganization:Planningcycle,Principlesoforganizationalcharts,Resource and quality management,planningchange-innovation	CO1, CO3

	C	Financial issues including budget and income generation	CO2,CO3
Unit 3	Recruitment		
A	Hospital administration: Organization, Staffing, Information, Communication, Coordination, Cost of services, Monitoring and evaluation.		CO3,CO4
B	Organization of physiotherapy department: Planning, Space, Manpower, Other basic resources. Organizing meetings, committees, and negotiations		CO3,CO4
C	Personnel management: Personnel performance appraisal system, Quality care delivery from the staff.		CO3,CO4
Unit 4	Aims of physiotherapy education		
A	Ethics of physiotherapy, A. Concepts of teaching and learning		CO4,CO5
B	e. Guidance and counseling f. Faculty development program g. Administration in clinical setting		CO4,CO5
C	h. Use of A-V aids in teaching i. Taxonomy of education		CO4,CO5
Unit 5	Curriculum development		
A	Curriculum development		CO1,CO2
B	Principles and methods of academic and clinical teaching		CO1,CO2
C	Measurement and evaluation		CO1,CO2
Mode of examination	Theory/Jury/Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	1. Hospital administration & planning by BM Sakharkar 2. Pedagogy in physiotherapy education by C.S Ram 3. A textbook of curriculum, pedagogy and evaluation by Dr.S.K Bhatia 4. Principle of management by PC Tripathi 5. Redefining healthcare by Michael E Porter		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

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

PRACTICAL

School: School of Allied Health Sciences	Batch : 2020-24	
Program: Bachelor's of physiotherapy	Current Academic Year: 2023-24	
Branch: Physiotherapy	Semester: VIII	
1	Course Code	BPT467
2	Course Title	ADMINISTRATION & TEACHING SKILLS
3	Credits	1
4	Contact Hours (L-T-P)	0-0-1
	Course Type	Practical
5	Course Objective	1.To understand management ,administration and organization. 2.To understand ethics of physiotherapist and various theories of management and administration.To educate the students about concept of teaching and learning. 3.To educate them to learn about philosophies of education 4.To provide knowledge about curriculum,techniques and methods of teaching.
6	Course Outcomes	CO1:Understand the role of administration and management. CO2:To know the use of various teaching aids. CO3:To know the role of employee and ethics of physiotherapist. CO4:Learn method and techniques of teaching. CO5:To understand financial issues faced in an organization and to understand the rules of an organization.
7	Course Description	This course presents knowledge and application of different teaching methodology to the students. The course begins with core topics of concepts of teaching and learning. The course also covers administration and management and role of physiotherapist in organization.
8	Outline syllabus	CO Mapping
	Unit 1	Introduction to administration
		Branchesofadministration,Natureandscopeofadministration. How to be an effective administrator. Planninghospitaladministrationas part ofabalancedhealthcareprogram.
		CO1, CO2
	Unit 2	Introduction to management
		Principlesof hospital administration and itsapplicationsto physiotherapy. Planningandorganization:Planningcycle,Principlesoforganizationalcharts,Resource and quality management,planningchange-innovation Financial issues includingbudget and incomegeneration
		CO2,CO3
	Unit 3	Recruitment
		Hospital administration: Organization, Staffing, Information, Communication, Coordination, Cost of services, Monitoring and evaluation.
		CO3,CO4

	Organization of physiotherapy department: Planning, Space, Manpower, Other basic resources. Organizing meetings, committees, and negotiations Personnel management: Personnel performance appraisal system, Quality care delivery from the staff.		
Unit 4	Aims of physiotherapy education		
	Ethics of physiotherapy, A. Concepts of teaching and learning	CO4, CO5	
	e. Guidance and counseling		
	f. Faculty development program		
	g. Administration in clinical setting		
	h. Use of A-V aids in teaching		
	i. Taxonomy of education		
Unit 5	Curriculum development		
	Curriculum development	CO1, CO2	
	Principles and methods of academic and clinical teaching		
	Measurement and evaluation		
Mode of examination	Practical/Viva		
Weightage Distribution	CA	MTE	ETE
	60%	0%	40%
Text book/s*	1. Hospital administration & planning by BM Sakharkar 2. Pedagogy in physiotherapy education by C.S Ram 3. A textbook of curriculum, pedagogy and evaluation by Dr.S.K Bhatia 4. Principle of management by PC Tripathi 5. Redefining healthcare by Michael E Porter		

Pos Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3

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

School: School Of Allied Health Sciences		Batch : 2020-24
Program: Bachelor's Of Physiotherapy(BPT)		Current Academic Year: 2023-24
Branch: Physiotherapy		Semester: VIII
1	Course Code	BPT443
2	Course Title	CLINICAL EDUCATION
3	Credits	6
4	Contact Hours (L-T-P)	0-0-12
	Course Type	CLINICAL PRACTICE
5	Course Objective	<ol style="list-style-type: none"> 1. Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. 2. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.
6	Course Outcomes	<p>CO1: To be able to apply the gained knowledge in clinical setup.</p> <p>CO2: Develop critically, strategically and in depth a topic or area of interest arising from the work done within the taught graduate framework and in student's area of academic or professional interest.</p> <p>CO3: To be able to utilize the gained knowledge practically and in hospital setup.</p> <p>CO4: Present and be able to utilize their rationale, approach or methodology, outcomes and conclusions.</p> <p>CO5: To be able to enhance practical knowledge, professional approach, academic rigour, independence and self direction.</p>
7	Course Description	Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.
8	Outline syllabus	CO Mapping
	Unit 1	Musculoskeletal physiotherapy
		Brief. Demonstration. Experimentation. Able to utilize modalities
	Unit 2	Cardio pulmonary physiotherapy
		Brief Demonstration Experimentation
	Unit 3	Sport's Rehabilitation

		Brief Demonstration Assesment and treatment	CO3,C04
	Unit 4	Neuromuscular and peditric physiotherapy	
		Brief Demonstration application	CO4,CO5
	Unit 5	Intensive care units and IPD, general medicine,obstetric and gynaecology	
		Brief Demonstration Assessment and application	CO1,CO5
Mode of examination		Jury/Practical/Viva	
Weightage Distribution		CA	MTE
		100%	0%
		ETE	0%

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	2	3
CO201.2	3	3	3	3	3	3	3	3	3	2	3
CO201.3	3	3	3	3	3	3	3	3	3	2	3
CO201.4	3	3	3	3	3	3	3	3	3	2	3
CO201.5	3	3	3	3	3	3	3	3	3	2	3

Project

School: School of allied health sciences	Batch : 2020-24	
Program: Bachelor's of physiotherapy	Current Academic Year: 2023-24	
Branch:Physiotherapy	Semester:VIII	
1	Course Code	BPT444
2	Course Title	PHYSIOTHERAPY PROJECT

3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Status	PROJECT	
5	Course Objective	<ol style="list-style-type: none"> 1. Enable students to develop and apply the skills of research and enquiry to produce original work which contributes to a subject, field or profession. 2. Engage students in study which demands a professional approach, academic rigour, independence and self direction. 	
6	Course Outcomes	<p>CO1: Explore and apply relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topic.</p> <p>CO2: Develop critically, strategically and in depth a topic or area of interest arising from the work done within the taught graduate framework and in the student's area of academic or professional interest.</p> <p>CO3: Develop further the research skills as acquired in the taught research modules, to demonstrate an ability to set the project in its wider context, to sustain argument and to present conclusions.</p> <p>CO4: Present and be able to defend their rationale, approach or methodology, outcomes and conclusions.</p>	
7	Course Description	The physiotherapy project will commence with the preparation of a research proposal. The student must submit an outline proposal to the research committee.	
8	Outline syllabus		CO Achievement
	Unit 1	Introduction	
		<ol style="list-style-type: none"> 1. Outline of the problem, issue or topic for the project and why it has been chosen. 2. A review of background material should be included to put the project in context of recent relevant literature and with other work done in the field 3. This should include journal as well as books. 	CO1, CO4
	Unit 2	Research question	
		<ol style="list-style-type: none"> 1. A statement of the proposed research/project. 2. Aim 3. Statement hypothesis 	CO2, CO3
	Unit 3	Ethical considerations	
		<ol style="list-style-type: none"> 1. Brief 2. Approval forms 	CO3, CO4

		3. Appropriate evidence			
	Unit 4	Method/Protocol			
		1. Brief 2. Outline of the method to be applied 3. Data collection			CO1,CO2
	Unit 5	Presentation/Finalization			
		1. Approval 2. References 3. Presentation			CO3,CO4
	Mode of examination	Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		60%	0%	40%	
	Text book/s*	-			
	Other References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO201.1	3	3	3	3	3	3	3	3	3	3	3
CO201.2	3	3	3	3	3	3	3	3	3	3	3
CO201.3	3	3	3	3	3	3	3	3	3	3	3
CO201.4	3	3	3	3	3	3	3	3	3	3	3
CO201.5	3	3	3	3	3	3	3	3	3	3	3
CO201.6	3	3	3	3	3	3	3	3	3	3	3