Program Structure Template

School of Allied Health Sciences
Bachelor of Physiotherapy

Batch – (2018-22)

Program Code – SAH0103

1. Standard Structure of the Program at University Level

1.1 Vision, Mission and Core Values of the University

Vision of the University

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

Mission of the University

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

Core Values

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

1.2 Vision and Mission of the School

Vision of the School

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

Mission of the School

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

Core Values

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

1.3 Programme Educational Objectives (PEO)

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

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

1.3.3 Program Outcomes (PO's)

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 Table[1]

Program Outcome Courses	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11
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	3	2	3	3	3	2	3	3	2	2	2
Course101.5	Inroduction to health Care delivery system	2	3	2	2	2	3	3	3	2	3	3
Cours101.6	BasicComputer & Information	2	3	2	2	3	2	3	3	3	2	3
Course 101.7	English Communication And Soft Skills											
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
Course201.4	General and Clinical Psychology	3	2	3	3	3	2	3	3	2	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	Community Medicine	2	3	2	2	3	2	3	3	3	2	3

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

501.4												
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
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 andGeneral 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 & teching 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											

1.3.5.2COURSE ARTICULATION MATRIX[2]

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-108	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

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

			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-109	Sociology	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 110	Introduction to health care delivery System	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 1.6	BPT 111	Basic computer	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 1.7	BPT 112	IEC & soft	CO1	3	3	2	3	3	3	3	2	3	3	2

		skills												
			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
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
Course 1.2.3	BPT 158	Biochemistry Lab	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 119	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
Course 2.4	BPT 115	General and Clinical Psychology	CO1	3	3	3	3	3	3	3	3	3	3	3
			CO2	3	3	3	3	3	3	3	2	3	3	3
			CO3	3	2	3	3	3	3	3	3	3	3	3
			CO4	3	3	3	3	3	3	2	3	3	2	3
			CO5	3	2	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 154	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 2.3.3	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 and soft tissue manipulation	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 and soft tissue manipulation	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	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	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	2	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-316	Physiotherapy in Orthopedics and Sports	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-313	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-314	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-315	Introduction to recent trends in physiotherapy	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 6.1.1	BPT-360	Physiotherapy in Orthopedics and Sports	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 6.2.2	BPT-361	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 6.3.3	BPT-362	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	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	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	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 7.6.4	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
			CO5	3	3	3	3	3	3	3	3	3	2	3
SEMESTER 8														
Theory														
Course 8.1	BPT466	Physiotherapy in	CO1	3	3	3	3	3	3	3	3	3	3	3

		cardiovascular, pulmonary intensive care												
			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	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
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 & teching 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

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

Program Structure Template
BPT Program Structure
School of Allied Health Sciences
Program:BPT

Program code: - SAH0103
Batch: 2018-2022
TERM: I

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[3]: 1. CC 2. AECC 3. SEC 4. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35001	BPT 106	Human Anatomy – I	4	1	0	5	Core	CC
2.	35002	BPT 107	Human Physiology – I	4	1	0	5	Core	CC
3.	35003	BPT 108	Biochemistry	4	0	0	4	Core	CC
4.	35004	BPT 109	Sociology	4	0	0	0	Core	SEC
5.	35005	BPT 110	Introduction to Health care delivery system	2	0	0	2	Pre-requisite	SEC
6.	35006	BPT 111	Basic computer & Information	2	0	0	2	Pre-requisite	SEC
7.	35007	BPt 112	English Communication and soft skills	1	0	0	1	Pre-requisite	SEC
Practical/Viva-Voce/Jury									
8.	35008	BPT 156	Human Anatomy-1	0	0	4	2	Core	DSC
•	35009	BPT 157	Human Physiology -1	0	0	2	1	Core	SEC
•	35010	BPT 158	Biochemistry Lab	0	0	2	1	Core	SEC
TOTAL CREDITS							**24**		

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

Program Structure Template
BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: II

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[4]: 1. CC 2. AECC 3. SEC 4. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35048	BPT 113	Human Anatomy- II	5	1	0	6	Core	CC
2.	35049	BPT 114	Human Physiology -II	5	1	0	6	Core	DSC
3.	35384	BPT 119	Basic principles of Biomechanics	5	1	0	6	Core	CC
4.	35050	BPT 115	General and Clinical Psychology	2	0	0	2	Core	SEC
Practical/Viva-Voce/Jury									
1.	35054	BPT 153	Human Anatomy-2			4	2	Core	CC
2.	35055	BPT 154	Human Physiology -2			4	2	Core	CC
3.	35056	BPT 159	Basic principles of Biomechanics			3	1	Core	CC

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

TOTAL CREDITS	25		

BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: III

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[5]: 5. CC 6. AECC 7. SEC 8. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35275	BPT 216	Pathology& Microbiology	6	0	0	6	Core	CC
2.	35276	BPT 217	Pharmacology	4	0	0	4	Core	DSC
3.	35154	BPT 209	Biomechanics & Kinesiology	4	1	0	5	Core	CC
4.	35155	BPT 210	Foundation of Exercise Therapy	4	1	0	5	Core	SEC
Practical/Viva-Voce/Jury									
1.	35158	BPT 259	Biomechanics & Kinesiology			4	2	Core	CC
2.	35159	BPT 260	Foundation of Exercise Therapy			4	2	Core	CC
3.	35157	BPT 003	Clinical observation			5	2	Core	CC
TOTAL CREDITS							**26**		

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

BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: IV

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[6]: 9. CC 10. AECC 11. SEC 12. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35385	BPT 219	Exercise Therapy	6	1	-	7	Core	CC
2.	35386	BPT 220	Electrotherapy	6	1	-	7	Core	DSC
3.	35383	BPT 218	Medical/ Physiotherapy Law and Ethics	3	1	-	4	Core	CC
Practical/Viva-Voce/Jury									
1.	35387	BPT 264	Exercise Therapy	-	-	6	3	Core	CC
2.	35388	BPT 265	Electrotherapy	-	-	6	3	Core	CC
3.	35389	BPT 266	Clinical Observation	-	-	6	3	Core	CC
TOTAL CREDITS							**29**		

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

BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: V

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[7]: 13. CC 14. AECC 15. SEC 16. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35264	BPT 308	General Medicine including Paediatric and Psychiatry	3	0	-	3	Core	CC
2.	35265	BPT 309	General Surgery including burns and plastic surgery& Obstetrics and Gynecology	3	0	-	3	Core	CC
3.	35266	BPT 310	Clinical Orthopaedics and Traumatology	3	0	-	3	Core	CC
4.	35267	BPT 311	Community Medicine	4	0	0	4	Core	CC
5.	35268	BPT 312	Interpretation of Diagnostic imaging technology	2	0	-	2	Core	CC
Practical/Viva-Voce/Jury									
1.	35269	BPT 350	Clinical Orthopedics&Traumatology			2	1	Core	CC
2	35274	BPT 359	General Surgery including burns and plastic surgery& Obstetrics and Gynecology			2	1	Core	CC
3	35273	BPT 358	General Medicine	0	0	2	1	Core	CC

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

4	35270	BPT 351	Community Medicine			2	1	Core	CC
5	35271	BPT 352	Interpretation of Diagnostic imaging technology			2	1	Core	CC
6.	35272	BPT 353	Clinical Education			8	4	Core	CC
TOTAL CREDITS							**26**		

BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: VI

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[8]: 17. CC 18. AECC 19. SEC 20. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35375	BPT 312	Physiotherapy in Orthopedics& sports	5	0	0	5	Core	CC
2.	35376	BPT 313	Physiotherapy in General Medicine and General surgery	5	0	0	5	Core	DSC
3.	35377	BPT 314	Clinical Neurology & Psychiatry	3	0	0	3	Core	CC
4.	35378	BPT 315	Introduction to recent trends in Physiotherapy	1	0	0	1	Core	SEC
Practical/Viva-Voce/Jury									
1.	35379	BPT 360	Physiotherapy in Orthopedics& sports			4	2	Core	CC
2	35380	BPT 361	Physiotherapy in General Medicine and General surgery			4	2	Core	CC
3	35381	BPT 362	Clinical Neurology & Neurosurgery			3	1	Core	CC
4	35382	BPT 363	Clinical Education			12	6	Core	CC
TOTAL CREDITS							**27**		

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

BPT Program Structure
School of Allied Health Sciences
Program:BPT
Program code: - SAH0103
Batch: 2018-2022
TERM: VII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[9]: 21. CC 22. AECC 23. SEC 24. DSE
				L	T	P			
THEORY SUBJECTS									
1.	35442	BPT 460	Physiotherapy in Neurology	5	0		5	Core	CC
2.	35443	BPT 462	Biostatistics & Research Methodology	4	0	-	4	Core	DSC
3.	35444	BPT 463	Health Promotion and Fitness	1	0	-	1	Core	CC
4.	35445	BPT 464	Clinical cardiovascular & pulmonary	3	0	-	3	Core	SEC
5.	35446	BPT 465	Principles of Management, Critique inquiry, casepresentation anddiscussion	1	0	-	1	Core	SEC
Practical/Viva-Voce/Jury									

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

1.	35447	BPT 441	Physiotherapy in Neurology & psychosomatic disorder	-	-	4	2	Core	DSC
2	35448	BPT 442	Health Promotion and Fitness			2	1		
3	35449	BPT 443	Clinical cardiovascular & pulmonary			2	1		
4	35450	BPT 444	Clinical Education			12	6		
TOTAL CREDITS							**24**		

Program code: - SAH0103
Batch: 2018-2022
TERM: VIII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre-Requisite/ Co Requisite	Type of Course[10]: 25. CC 26. AECC 27. SEC 28. DSE
				L	T	P			
THEORY SUBJECTS									
1.		BPT 466	Physiotherapy in cardiovascular, pulmonary &intensive care	5	0		5	Core	CC
2.		BPT 467	Community Physiotherapy	4	0		4	Core	DSC
3.		BPT 468	Clinical reasoning & Evidence based physiotherapy	1	0		1	Core	CC
4.		BPT 469	Administration and Teaching Skills	1	0		1	Core	SEC
Practical/Viva-Voce/Jury									
1.		BPT 445	Physiotherapy in cardiovascular, pulmonary &intensive care	-	-	4	2	Core	DSC
2		BPT 446	Community Physiotherapy	-	-	4	2	Core	CC
3		BPT 447	Clinical reasoning & Evidence based physiotherapy			2	1	Core	CC
4		BPT 448	Administration and Teaching Skills			2	1	Core	CC
		BPT 450	Research Project			4	2	Core	CC
		BPT 449	Clinical Education			12	6		CC
TOTAL CREDITS							**27**		

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

Table 1. Evaluation Scheme for BPT I Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35001	BPT 106	Human Anatomy – I	30	20	50	100
2	35002	BPT 107	Human Physiology – I	30	20	50	100
3	35003	BPT 108	Biochemistry	30	20	50	100
4	35004	BPT 109	Sociology	30	20	50	100
5	35005	BPT 110	Introduction to health care delivery system	50	-	-	Not for ETE
6	35006	BPT 111	Basic computer & Information	50	-	-	Not for ETE
7	35007	BPT 112	English Communication and soft skills	50	-	-	Not for ETE
PRACTICAL SUBJECTS							
1	35008	BPT 156	Human Anatomy-1	60	-	40	100
2	35009	BPT 157	Human Physiology -1	60	-	40	100
3	35010	BPT 158	Biochemistry Lab	60	-	40	100

Table 2. Evaluation Scheme for BPT II Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35048	BPT 113	Human Anatomy-II	30	20	50	100
2	35049	BPT 114	Human Physiology -II	30	20	50	100
3	35384	BPT 119	Basic principles of Biomechanics	30	20	50	100
4	35050	BPT 115	General and Clinical Psychology	30	20	50	100
PRACTICAL SUBJECTS							
1	35054	BPT 153	Human Anatomy-2	60	-	40	100
2	35055	BPT 154	Human Physiology -2	60	-	40	100
3	35056	BPT 159	Basic principles of Biomechanics	60	-	40	100

Table 3. Evaluation Scheme for BPT III Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35275	BPT 216	Pathology& Microbiology	30	20	50	100
2	35276	BPT 217	Pharmacology	30	20	50	100
3	35154	BPT 209	Biomechanics & Kinesiology	30	20	50	100
4	35155	BPT 210	Foundation of Exercise Therapy	30	20	50	100
PRACTICAL SUBJECTS							
1	35158	BPT 259	Biomechanics & Kinesiology	60	-	40	100
2	35159	BPT 260	Foundation of Exercise Therapy	60	-	40	100
3	35157	BPT 003	Clinical observation	100	-	-	Not for ESE

Table 4. Evaluation Scheme for BPT IV Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35385	BPT 219	Exercise Therapy	30	20	50	100
2	35386	BPT 220	Electrotherapy	30	20	50	100
3	35383	BPT 218	Medical/ Physiotherapy Law and Ethics	30	20	50	100
PRACTICAL SUBJECTS							
1	35387	BPT 264	Exercise Therapy	60	-	40	100
2	35388	BPT 265	Electrotherapy	60	-	40	100
3	35389	BPT 266	Clinical Observation	100	-	-	Not for ESE

Table 5 . Evaluation Scheme for BPT V Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35264	BPT 308	General Medicine including paediatrics and Psychiatry	30	20	50	100
2	35265	BPT 309	General Surgery including burns and plastic surgery& Obstetrics and Gynecology	30	20	50	100
3	35266	BPT 310	Clinical Orthopaedics & Traumatology	30	20	50	100
4	35267	BPT 311	Community Medicine	30	20	50	100
5	35268	BPT 312	Interpretation of Diagnostic imaging technology	30	20	50	100
PRACTICAL SUBJECTS							
1	35273	BPT 358	General Medicine including paediatrics and Psychiatry	60	-	40	100
2	35274	BPT 359	General Surgery including burns and plastic surgery& Obstetrics and Gynecology	60	-	40	100
3	35269	BPT 350	Clinical Orthopaedics & Traumatology	60	-	40	100
4	35270	BPT 351	Community Medicine	60	-	40	100
5	35271	BPT 352	Interpretation of Diagnostic imaging technology	60	-	40	100
6	35272	BPT 353	Clinical Education	100	-	-	Not for ESE

Table 6. Evaluation Scheme for BPT VI Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35375	BPT 312	Physiotherapy in Orthopedics& sports	30	20	50	100
2	35376	BPT 313	Physiotherapy in General Medicine and Generalsurgery	30	20	50	100
3	35377	BPT 314	Clinical Neurology & Psychiatry	30	20	50	100
4	35378	BPT 315	Introduction to recent trends in Physiotherapy	100	-	-	Not for ESE
PRACTICAL SUBJECTS							
1	35379	BPT 360	Physiotherapy in Orthopedics& sports	60	-	40	100
2	35380	BPT 361	Physiotherapy in General Medicine and General surgery	60	-	40	100
3	35381	BPT 362	Clinical Neurology & Neurosurgery	60	-	40	100
4	35382	BPT 363	Clinical Education	100	-	-	Not for ESE

Table 7. Evaluation Scheme for BPT VII Term University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1	35442	BPT 460	Physiotherapy in Neurology & psychosomatic disorder	30	20	50	100
2	35443	BPT 462	Biostatistics & Research Methodology	30	20	50	100
3	35444	BPT 463	Health Promotion and Fitness	30	20	50	100
4	35445	BPT 464	Clinical cardiovascular & pulmonary	30	20	50	100
5	35446	BPT 465	Principles of Management, Critique inquiry, casepresentation anddiscussion	30	20	50	100
PRACTICAL SUBJECTS							
1	35447	BPT 441	Physiotherapy in Neurology & psychosomatic disorder	60	-	40	100
2	35448	BPT 442	Health Promotion and Fitness	60	-	40	100
3	35449	BPT 443	Clinical cardiovascular & pulmonary	60	-	40	100
4	35450	BPT 444	Clinical Education	100	-	-	Not for ESE

Table 8. Evaluation Scheme for BPT VIIITerm University examination

S. No.	Paper ID	Subject Code	Subjects	CA	MSE	ESE	Total marks
THEORY SUBJECTS							
1		BPT 466	Physiotherapy in cardiovascular, pulmonary &intensive care	30	20	50	100
2		BPT 467	Community Physiotherapy	30	20	50	100
3		BPT 468	Clinical reasoning & Evidence based physiotherapy	30	20	50	100
4		BPT 469	Administration and Teaching Skills	30	20	50	100
PRACTICAL SUBJECTS							
1		BPT 445	Physiotherapy in cardiovascular, pulmonary &intensive care	60	-	40	100
2		BPT 446	Community Physiotherapy	60	-	40	100
3		BPT 447	Clinical reasoning & Evidence based physiotherapy	60	-	40	100
4		BPT 448	Administration and Teaching Skills	60	-	40	100
5		BPT 450	Research Project	100	-	-	Not for ESE
6		BPT 449	Clinical Education	100	-	-	Not for ESE

NOTE:

1. **Value added courses are mandatory for each student of odd semester (list enclosed in Annexure I) and non-graded.**

2. **Open elective course is mandatory for each student of even semester (list of approved open elective courses offered by the university as enclosed in Annexure 2). The course will be run in audit mode and students will have to pass it.**

C. Course Templates

FIRST SEMESTER

School: School Of Allied Health Sciences			**Batch : 2018-22**
Program: Bachelors Of Physiotherapy(BPT)		**Current Academic Year: 2018-2019**	
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	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	CO1: To identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions. 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. CO3: To understand the bones, joints, muscles, vascular and nerve supply of upper limb. CO4: To know about basic anatomical knowledge of boundaries and contents of thoracic cavity. CO5: To understand the bones, joints, muscles, vascular and nerve supply of head and neck.	
7	Course Description	It is designed to provide students with the workingknowledge 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	CO1, CO2

	B	Cardiovascular system, Lymphatic system, Nervous system			CO1,CO2
	C	Skin and fascia, Connective tissue, ligaments and raphe, Principles of radiography			CO1,CO2
	Unit 2	Upper extremity			
	A	Muscles – origin, insertion, nerve supply and actions.			CO1, CO3
	B	Osteology: Clavicles, Scapula, Humerus, Radius, Ulna, Carpals, Metacarpals, Phalanges.			CO1, 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*	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

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

School: School Of Allied Health Sciences		**Batch : 2018-22**
Program: Bachelors of Physiotherapy(BPT)		**Current Academic Year: 2018-2019**
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	CO1: Understand the cell physiology in detail including the transport mechanism of human body and blood and body fluid distribution and composition. CO2: Understand interaction and integration of different organ systems in health and diseases special nerve-muscle physiology. 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 CO4: Describe the physiology of respiratory system which include mechanics of breathing, spirometry, transport of gases and the common disorders of respiratory system. CO5: Demonstrate in depth knowledge of digestive and endocrine system.	
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 : 2018-22**
Program: Bachelors of Physiotherapy(BPT)	**Current Academic Year: 2018-2019**
Branch: Physiotherapy	**Semester: I**

1	Course Code	**BPT 108**
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	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. 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. 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. 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. 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. 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
7	Course	The course describe structures & functions of cell in brief; normal

	Description	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,	CO2,CO4

		Isoenzymes, Diagnostic enzymology (clinical significance of enzymes)	
	B	Nucleotide and Nucleic acid Chemistry-Nucleotide 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.	CO2,C04
	C	Digestion and Absorption- General characteristics of digestion and absorption, Digestion and absorption of carbohydrates,proteinsandlipids.Disordersofdigestionandabsorption –Lactose intolerance.	CO2,C04
	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 - Denovosynthesis of fatty acids, chain elongation, desaturation, triacylglycerol synthesis, fat metabolism in adipose tissues Ketone body metabolism: Ketone body formation (ketogenesis), utilization (ketolysis), ketosis, Rothera'stest. 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,C06
	B	Cell Biology-Introduction, Cell structure, Cell membrane	CO4,C06

		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.			
	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*	1. Biochemstry by U. Satyanarayana II Edition. 2. Text Book of Biochemstry by D.M. Vasudevan and Sreekumari S. IV Edition. 3. Textbook of Medical Biochemistry-S.K.Das Gupta. 4. Lippincott's Illustrated Reviews Biochemistry. 5. Harper's Illustrated Biochemstry by Murry et.a1.26 Edition			
	Other References	1. Albert Lehininger, Principles of biochemistry 1993 2. James M Orten, Human biochemistry 3. Lubert Strayer, Biochemistry 4. 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 : 2018-22**
Program: Bachelors of Physiotherapy		**Current Academic Year: 2018-2019**
Branch: Physiotherapy		**Semester : I**
1	Course Code	**BPT 109**
2	Course Title	**SOCIOLOGY**
3	Credits	**2**
4	Contact Hours (L-T-P)	**2-0-0**
	Course Type	DSE
5	Course Objective	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	CO1: Understand the role of family and community in the development of behaviours. CO2: Develop a holistic outlook toward the structure of society and community resources, understand the significance of social interactions in the process of rehabilitation. 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. CO4: Psychosocial assessment of patients in various developmental stages. CO5: Concept of stress and its relationship to health, sickness and one's profession.

		CO6: Ego defense mechanisms and learn counselling techniques to help those in need, Reasons for non-compliance among patients and improving compliance behavior	
7	Course Description	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. 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 of Psychology with respect to Physiotherapy treatment	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Introduction: a. Meaning-Definition and scope of sociology b. Its relation to Anthropology, Psychology, Social Psychology. c. Methods of Sociological investigations- Case study, social survey, questionnaire, Interview and opinion poll methods.	CO1, CO2
	B	Importance of its study with special reference to Health Care Professionals. Social Factors in Health and disease situations: Meaning of social factors Role of social factors in health and illness	CO1, CO2
	C	Socialization: a. Meaning and nature of socialization. b. Primary, Secondary and Anticipatory socialization. c. Agencies of socialization. Social Groups: 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.	CO1, CO2
	Unit 2		
	A	Family: The family, meaning and definitions. Functions of types of family	CO1, CO3
	B	Changing family patterns Influence of family on the individual shealth, family and nutrition, the effects of sickness in the family and psychosomatic disease and their importance to physiotherapy.	CO1, CO3

	C	Community: a. Rural community: Meaning and features–Health hazards of ruralities, health hazards to tribal community. b. Urban community: Meaning and features-Health hazards of urbanities.	CO1, CO3
	Unit 3		
	A	Culture and Health: a. Concept of Health b. Concept of Culture c. Culture and Health d. Culture and Health Disorders	CO4,CO5
	B	Social change: Meaning of social changes. Factors of social changes. Human adaptation and social change Social change and stress.	CO4,CO5
	C	Social change and deviance. Social change and health programme The role of social planning in the improvement of health and rehabilitation.	CO4,CO5
	Unit 4		
	A	Social Problems of disabled: Consequences of the following social problems in relation to sickness and disability, remedies to prevent these problems. a. Population explosion b. Poverty and unemployment c. Beggary	CO4,CO5
	B	Juvenile delinquency e. Prostitution f. Alchoholism	CO4,CO5
	C	Problems of women in employment Geriatric problems Problems of underprivileged	CO4,CO5
	Unit 5		
	A	Social security and social legislation in relation to the disabled.	CO5,CO6
	B	Social worker: Meaning of Social Work	CO5,CO6
	C	The role of a Medical Social Worker.	CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva	

	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	1. Morgan, C. T., Rosen, J. W., Morgan, C. T., & King, R. A. Study guide for Morgan and King Introduction to psychology: 2. Baron, R.A.. Introduction to Psychology 3. Megee-sociology'Drydonpressclilinois. 4. Kupuswamy- Social Changes in India -Vikas 5. Ahuja- Social problems-Bookhive 6. 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 :2018-22**
Program: Bachelors of Physiotherapy		**Current Academic Year:2018-19**
Branch: Physiotherapy		**Semester: I**
1	Course Code	**BPT 111**
2	Course Title	**BASIC COMPUTER & INFORMATION**
3	Credits	**2**
4	Contact Hours (L-T-P)	**2-0-0**
	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	CO1: Tell about the fundamentals of computer like generations, languages, input-output devices, storage and memory and processes. CO2: Describe the basic use of Windows, computer applications like MS word, Excel and power points. CO3: describe different operating system, types and components of computer networks, CO4: Use the internet and application of computer in clinical settings. CO5: Understand about the grammatical and idiomatic usages, Gain knowledge about various methods of patient education, barriers of communication and how to overcome them. 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.
7	Course Description	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 The course is designed to enable students to enhance ability to comprehend spoken and written English, required for effective communication in their professional work.
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.	CO1, CO3
	C	Page setting and formatting the text, saving the document, spell checking, printing the document file, creating and editing of table, mail merge.	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.	CO3,CO4
	C	Computer networks: introduction, types of network (LAN, MAN, WAN, Internet, Intranet), network topologies (star, ring, bus, mesh, tree, hybrid), components of network.	CO3,CO4
	Unit 4		
	A	Introduction to Excel: introduction, about worksheet, entering information, ,	CO5,CO6
	B	saving work books and formatting	CO5,CO6
	C	printing the worksheet, creating graphs.	CO5,CO6
	Unit 5		
	A	Internet and its Applications: definition, brief history, basic services (E-Mail, File Transfer Protocol, telnet, the World Wide Web (WWW)), www browsers,	CO6,CO7
	B	Use of the internet.	CO6,CO7

	C	Application of Computers in clinical settings.			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.			
	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)

School: School of allied health sciences		**Batch :2018-22**
Program: Bachelors of Physiotherapy		**Current Academic Year:2018-19**
Branch: Physiotherapy		**Semester: I**
1	Course Code	**BPT 112**
2	Course Title	**BASIC COMPUTER & INFORMATION ENGLISH COMMUNICATION AND SOFT SKILLS**
3	Credits	**1**
4	Contact Hours (L-T-P)	**1-0-0**
	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	CO1: Tell about the fundamentals of computer like generations, languages, input-output devices, storage and memory and processes. CO2: Describe the basic use of Windows, computer applications like MS word, Excel and power points. CO3: describe different operating system, types and components of computer networks, CO4: Use the internet and application of computer in clinical settings. CO5: Understand about the grammatical and idiomatic usages, Gain knowledge about various methods of patient education, barriers of communication and how to overcome them. 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.	
7	Course Description	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 The course is designed to enable students to enhance ability to comprehend spoken and written English, required for effective communication in their professional work.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Basic Language Skills: Grammar and Usage.	CO1, CO2
	B	Business Communication Skills. With focus on speaking	CO1, CO2
	C	Conversations, discussions, dialogues, short presentations, pronunciation.	CO1, CO2
	Unit 2		
	A	Teaching the different methods of writing like letters, E-mails, report, case study.	
	B	Collecting the patient data etc..	CO1, CO3
	C	Basic compositions, journals, with a focus on paragraph form and organization	CO1, CO3
	Unit 3		CO1, CO3
	A	Types & process of communication–verbal, non-verbal	CO3,CO4
	B	Written communication	CO3,CO4

	C	Upward, downward and lateral communication.			CO3,CO4
	Unit 4				
	A	Basic concepts& principles of good communication			CO5,CO6
	B	Special characteristics of health communication			CO5,CO6
	C	Barriers of communication & how to overcome			CO5,CO6
	Unit 5				
	A	Therapeutic communication: empathy versus sympathy.			CO6,CO7
	B	Communication methods for teaching and learning.			CO6,CO7
	C	Communication methods for patient education.			CO6,CO7
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	1.English Grammar Composition & Usage by J.C. Nesfield, Macmillan Publishers 2. The Business letters by Madan Sood 3. 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: 2018-22**
Program: Bachelors of physiotherapy		**Current Academic Year: 2018-2019**
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	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	CO1: To identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions. 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.

		CO3: To understand the bones, joints, muscles, vascular and nerve supply of upper limb. CO4: To know about basic anatomical knowledge of boundaries and contents of thoracic cavity. CO5: To understand the bones, joints, muscles, vascular and nerve supply of head and neck.			
7	Course Description	It is designed to provide students with the workingknowledge of the structure of the human body which is essential foundation for their clinical studies.			
8	Outline syllabus				CO Mapping
	Unit 1	**GENERAL ANATOMY**			
		1. Brief 2. Demonstration. 3. Identification			CO1, CO2
	Unit 2	**UPPER EXTREMITY**			
		1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO1, CO3
	Unit 3	**UPPER EXTREMITY JOINT**			
		1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO2,CO4
	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 : 2018-22**
Program: Bachelors Of Physiotherapy (BPT)		**Current Academic Year: 2018-2019**
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	CO1: Understand the cell physiology in detail including the transport mechanism of human body and blood and body fluid distribution and composition. CO2: Understand interaction and integration of different organ systems in health and diseases special

		nerve-muscle physiology. 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 CO4: Describe the physiology of respiratory system which include mechanics of breathing, spirometry, transport of gases and the common disorders of respiratory system. CO5: Demonstrate in depth knowledge of digestive and endocrine system.	
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		
		1. Demonstration of Microscope 2. Demonstration of Haemoglobin estimation 3. Experimentation	CO1,CO3
	Unit 2		
		1. Total Red Blood Cell Count 2. Total Leucocyte Count. 3. Experimentation	CO1,C03
	Unit 3		
		1. BT, CT, Blood Group. 2. Estimation and Demonstration of ESR 3. Estimation and Demonstration of PCV.	CO2,C03
	Unit 4		
		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		

		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

School: School Of Allied Health Sciences		**Batch : 2018-22**
Program: Bachelors of Physiotherapy(BPT)		**Current Academic Year: 2018-2019**
Branch: Physiotherapy		**Semester: I**
1	Course Code	**BPT 158**
2	Course Title	**BIOCHEMISTRY**
3	Credits	**1**
4	Contact Hours (L-T-P)	**0-0-2**
	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	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. 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. 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. 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. 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. 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	
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	CO1, CO2

		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	
	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 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.	CO2,C04
	C	Digestion and Absorption- General characteristics of digestion and absorption, Digestion and absorption of carbohydrates,proteinsandlipids.Disordersofdigestionandabsorptio	CO2,C04

		n –Lactose intolerance.	
	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 - Denovosynthesis of fatty acids, chain elongation, desaturation, triacylglycerol synthesis, fat metabolism in adipose tissues Ketone body metabolism: Ketone body formation (ketogenesis), utilization (ketolysis), ketosis, Rothera'stest. 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,C06
	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	CO4,C06

		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.			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	6. Biochemstry by U. Satyanarayana II Edition. 7. Text Book of Biochemstry by D.M. Vasudevan and Sreekumari S. IV Edition. 8. Textbook of Medical Biochemistry-S.K.Das Gupta. 9. Lippincott's Illustrated Reviews Biochemistry. 10. Harper's Illustrated Biochemstry by Murry et.a1.26 Edition			
	Other References	5. Albert Lehininger, Principles of biochemistry 1993 6. James M Orten, Human biochemistry 7. Lubert Strayer, Biochemistry 8. 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)

SECOND SEMESTER

School: School Of Allied Health Sciences		**Batch :2018-22**	
Program: Bachelors of physiotherapy		**Current Academic Year:2018-2029**	
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	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. 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.	
6	Course Outcomes	CO1: Identify the axis and planes of different movements in human body and should be able to tell common anatomical terminology. 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. 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. CO4: Gain knowledge of greater vessels, muscles and structural and functional importance of different viscera CO5: Identify and describe various parts of nervous system	
7	Course Description	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.	
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,CO3
	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,CO3
	B	Position, shape, size, features, blood supply of the female reproductive system.	CO1,CO3
	C	Nerve supply of the male and female reproductive system.	CO1,CO3
	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,CO4
	Unit 5	**Joints of Lower Extremity**	
	A	Hip Joint	CO2,CO3

	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*	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

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

School: School Of Allied Health Sciences	**Batch :2018-22**
Program: Bachelors of physiotherapy	**Current Academic Year:2018-19**

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,CO5
	Unit 2	**Endocrine System**	
	A	General principles of endocrinology, pituitary gland. Thyroid Gland, Adrenal Cortex & Pancreas.	CO1,CO3
	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,CO3
	B	The Female Reproductive System-- female sexual cycle , ovulation and contraception.			CO1,CO3
	C	Physiological changes during pregnancy, child birth, functions of placenta and physiology of lactation.			CO1,CO3
	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,CO4
	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,CO3
	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: 2018-22**
Program: Bachelors	**Current Academic Year:2018-19**

of physiotherapy			
Branch: Physiotherapy		**Semester: II**	
1	Course Code	**BPT 119**	
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	CO1, CO6

		Definition of Forces	
	B	Forceof 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,C O6
	Unit 2	Joint structure and Function	
	A	Joint design Materials used in human joints	CO2,C O3
	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,C O3
	B	Elements of muscle structure Muscle function	CO2,C 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	Theory/jury/Practical/Viva	

	examination				
	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

School: School of Allied Health Sciences		**Batch : 2018-22**
Program: Bachelors of Physiotherapy		**Current Academic Year: 2018-2019**
Branch: Physiotherapy		**Semester : II**
1	Course Code	**BPT 115**
2	Course Title	**GENERAL AND CLINICAL PSYCHOLOGY**
3	Credits	**2**
4	Contact Hours (L-T-P)	**2-0-0**
	Course Type	DSE
5	Course Objective	3. 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. 4. 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	CO1: Understand the role of family and community in the development of behaviours. CO2: Develop a holistic outlook toward the structure of society and community resources, understand the significance of social interactions in the process of rehabilitation. 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. CO4: Psychosocial assessment of patients in various developmental stages. CO5: Concept of stress and its relationship to health, sickness and one's profession. CO6: Ego defense mechanisms and learn counselling techniques to help those in need, Reasons for non-compliance among patients and improving compliance behavior	
7	Course Description	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. 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 of Psychology with respect to Physiotherapy treatment	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Introduction to Psychology a. Schools: Structuralism, functionalism, behaviorism, Psychoanalysis. b. Methods: Introspection, observation, inventory and experimental method.	CO1, CO2
	B	Branches: pure psychology and applied psychology Psychology and physiotherapy Growth and Development	CO1, CO2
	C	Lifespan: Different stages of development (Infancy, childhood, adolescence, adulthood, middle age, old age).	CO1, CO2

		b. Heredity and environment: role of heredity and environment in physical and psychological development, “Nature v/s Nurture controversy”.	
	Unit 2		
	A	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).	CO1, CO3
	B	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.	CO1, CO3
	C	Motivation a. Motivation cycle (need, drive, incentive, reward). b. Classification of motives. c. Abraham Maslow’s theory of need hierarchy	CO1, CO3
	Unit 3		
	A	Intelligence a. Theories of intelligence. b. Distribution of intelligence. c. Assessment of intelligence	CO4,CO5
	B	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	CO4,CO5
	C	Social psychology a. Leadership: Different types of leaders. Different theoretical approaches to leadership. b. Attitude: development of attitude. Change of attitude.	CO4,CO5
	Unit 4		
	A	Frustration and conflict a. Frustration: sources of frustration. b. Conflict: types of conflict. c. Management of frustration and conflict	CO4,CO5

	B	Emotions a. Three levels of analysis of emotion (physiological level, subjective state, and overt behavior). b. Theories of emotion c. Stress and management of stress.				CO4,CO5
	C	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.				CO4,CO5
	Unit 5					
	A	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.				CO5,CO6
	B	Defense Mechanisms: denial of reality, rationalization, projection, reaction formation, identification, repression, regression, intellectualization, undoing, introjection, acting out				CO5,CO6
	C	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.				CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva				
	Weightage Distribution	CA	MTE	ETE		
		30%	20%	50%		
	Text book/s*	9. Morgan, C. T., Rosen, J. W., Morgan, C. T., & King, R. A. Study guide for Morgan and King Introduction to psychology: 10. Baron, R.A.. Introduction to Psychology 11. Megee-sociology'Drydonpressclilinois. 12. Kupuswamy- Social Changes in India -Vikas 13. Ahuja- Social problems-Bookhive 14. Gihnsberg- Principles of sociology-sterling				

		publications. 15. Julian- Social Problem- Prentice hall. 16. Introduction to social psychology- Akolkar- Oxford publishing house.	
	Other References	3. Psychology and sociology - Applied to Medicine - Porter & Alder - W. B.Saunders. 4. 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)

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: 2018-22**
Program: Bachelors of physiotherapy		**Current Academic Year:2018-2019**
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	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. 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.	
6	Course Outcomes	CO1: Identify the axis and planes of different movements in human body and should be able to tell common anatomical terminology. 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. 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. CO4: Gain knowledge of greater vessels, muscles and structural and functional importance of different viscera CO5: Identify and describe various parts of nervous system	
7	Course Description	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.	
8	Outline syllabus		CO Mapping
	Unit 1	**Neuro Anatomy**	
		1. Brief 2. Surface Anatomy 3. Demonstration & Examination	CO1,CO5
	Unit 2	**Abdomen**	
		1. Brief 2. Surface Anatomy 3. Demonstration & Examination	CO1, CO3
	Unit 3	**Pelvis**	
		1. Brief 2. Surface Anatomy	CO1,CO3

		3. Demonstration & Examination			
	Unit 4	**Lower Extremity**			
		1. Brief 2. Surface Anatomy 3. Demonstration & Examination			CO3,CO4
	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 Allied Health Sciences **Batch: 2018-22**

Program: Bachelors of physiotherapy **Current Academic Year: 2018-2019**

Branch:Physiotherapy **Semester: II**

1	Course Code	**BPT 154**	
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	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		
		1. Differential Leucocyte Count. 2. Demonstration 3. Experimentation	CO1,CO5
	Unit 2		
		1. Arterial Blood Pressure and radial pulse.	CO1,CO3

		2. Effect of Exercise on B.P. 3. Effect of Posture on B.P.	
	Unit 3		
		1. General Clinical Examination 2. Clinical Examination of CVS 3. Clinical Examination of Respiratory System	CO1,CO3
	Unit 4		
		1. Clinical Examination of Cranial nerves 2. Clinical Examination of Sensory system 3. Clinical Examination of Motor system.	CO3, CO4
	Unit 5		
		1. Demonstration of normal frog cardiogram 2. Effect of temperature on it. 3. Demonstration	CO2,CO3
	Mode of examination	Practical/Viva	
	Weightage Distribution	CA: 60% / MTE: 0% / ETE: 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: 2018-22**
Program: Bachelors of physiotherapy		**Current Academic Year: 2018-2019**
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,CO3
	Unit 3	Muscle structure and function			
		1. Brief 2. Demonstration 3. Examination			CO2,CO3
	Unit 4	Biomechanics of the Thorax and Chest wall			
		1. Brief 2. Demonstration 3. Examination			CO2, CO4
	Unit 5	The Temporomandibular Joint-			
	A	1. Brief 2. Demonstration 3. Examination			CO2,CO5
	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 : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:SAHS		**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	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) 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.
6	Course Outcomes	At the end of the course, the student will be able to CO1: Acquire the knowledge of concepts of cell injury and changes Produced thereby indifferent tissues and organs; Capacity of the body in healing Process. 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. 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. 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 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. CO6: Understand in brief, about the Hematological diseases and their resultant effects on the human body.
7	Course Descriptio	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.

	n	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	CO1, CO2
	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.	CO1, CO3
	Unit 2		
	A	Hyperemia /Ischemia and Haemorrhage Edema: Pathogenesis and types .Chronic venous congestion: Lung ,Liver, Spleen, Systemic Pathology Thrombosis and	CO3, CO4

		Embolism: Formation, Fate and Effects. Infarction: Types, Common sites Shock: Pathogenesis, types, morphologic changes.	
	B	**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:Environmentalcarcinogens,chemical,viral,occupational.Hereditыand cellular oncogenes and prevention of cancer.Benign &Malignant epithelial tumours Eg. Squamous papilloma, Squamous cell carcinoma, Malignant melanoma.Benign&Malignant mesenchymaltumours Eg: Fibroma, Lipoma, Neurofibroma, Fibrosarcoma,Liposarcoma, Rhabdo-myosarcoma, Teratoma.	
	C	**Genetic disorders:** 1)Genetic Disorders–. Basic concepts of genetic disorders and some common examples and congenital malformation. **Hematology:** **1)** Nutritionalanemias,Acquired hemolytic anaemias,Hemostatic disorders, Vascular and Platelet disorders& lab diagnosis. Coagulopathies,Leukocytic disorders,Leukemia,Blood transfusion	CO3, CO6
	Unit 3	**Lymphatic system**	
	A	1)Diseases of the gall bladder- cholecystitis, cholelithiasis, carcinoma, lymphadenitis-nonspecific and granulomatous. Causes of lymph node enlargements. Reactive Hyperplasia,Primary Tumours-Hodgkin& and Nonhodgkin& Lymphomas,Metastatic Tumours, Causes of Splenic Enlargements. 2) Inflammations and Infections: TB Meningitis, Pyogenic Meningitis,viral meningitis and Brain Abscess, Tuberculosis, Cysticercosis **Neuropathology:**	CO3, CO6

		1) CNS Tumors, Astrocytoma, Neuroblastoma, Meningioma, Medulloblastoma	
	B	**Introduction of Microbiology:** 1)Medical terminologies , Importance and applications of medical microbiology 2) Sterilization 3) Antiseptic and disinfection	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	**CO3, CO5**

		Virology: 1. Polio virus 2. Orthomyxovirus 3. Paramyxovirus 4. Hepatitis 5. Herpesvirus 6. HIV			
	B	Mycology: 1. Subcutaneous Mycoses 2. Superficial mycosis 3. Opportunistic Mycoses			
	C	**Applied Microbiology** 1)Hospital acquired infection 2)Biomedical waste management 3)Central nervous System infections 4)Meningitis			CO2, CO3
	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 ofMicrobiology– 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	PSO1	PSO2	PSO3	PSO4
CO1	2	2	3	3	3	3	2	2	3	2	3	2	2	3	2	2
CO2	2	3	2	2	2	2	2	3	3	2	3	3	3	2	2	2
CO	2	2	2	2	3	3	3	2	2	3	2	2	3	2	2	3

4																
CO 5	3	2	3	3	2	2	2	2	2	3	3	2	3	2	2	2
CO 6	2	2	3	2	2	3	3	3	2	2	2	3	2	2	3	3

Template 2

School: SAHS		**Batch : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:		**Semester:3RD**
1	Course Code	BPT217
2	Course Title	Pharmacology
3	Credits	4
4	Contact Hours (L-T-P)	4-0-0
	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 syctem ,GOT,endocrine system,by drugs 3.To make student understand the drug and physiotherapy contribuition 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	CO 1, CO 2
	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–**	**CO 1,CO2, CO 3**
	A	General considerations-The SympatheticandParasympatheticSystems,Receptors, Somatic NervousSystemCholinergic andAnti-Cholinergicdrugs,AdrenergicandAdrenergicblockingdrugs, 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 ChannelBlockers,ACEInhibitors,CentralActingAlphaAgonists,PeripheralAlphaAntagonists,Direct acting Vasodilators	
	Unit 3	Neuropharmacology & Disorders of Movement	**CO 1,CO3. CO 5**
	A	Sedative-Hypnotic Drugs: Barbiturates, Benzodiazepines Antianxiety Drugs: Benzodiazepines, Other Anxiolytics DrugsUsedinTreatmentofMoodDisorders:MonoamineOxidaseInhibitors,Tricyclic	
	B	Antidepressants, Atypical Antidepressants, Lithium d. Antipsychotic drugs	
	C	Drugsused in Treatment of Parkinson'sdisease AntiepilepticDrugs,Spasticity and Skeletal MuscleRelaxants	
	Unit 4	Inflammatory/ImmuneDiseases	
	A	Non-narcoticAnalgesicsandNonsteroidalAnti-InflammatoryDrugs:Acetaminophen,NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interactinswith NSAIDs	
	B	Glucocorticoids:PharmacologicalUsesofGlucocorticoids,adverseeffects,Physiologic Use ofGlucocorticoids	
	C	DrugsUsedinTreatmentofArthriticDiseases:RheumatoidArthritis,Osteoarthritis,Gout,Myastheniagravis,IdiopathicInflammatoryMyopathies,systemiclupusErythematous,Scleroderma,Demyelinating Disease RespiratoryPharmacology:ObstructiveAirwayDiseases,DrugsusedinTreatmentofObstructive airway Diseases ,Allergic Rhinitis.	C01 ,CO 5
	Unit 5	Digestion and Metabolism & Geriatrics-	
	A	Gastrointestinal Pharmacology: Peptic Ulcer Disease, Constipation, Diarrhoea	CO 1,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			
	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
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 : 2018-22**
Program: BPT	**Current Academic Year: 2019-20**

Branch:SAHS		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 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 ,Vertebral 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	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	Thehipcomplex:structureandfunctionofthehipjoint;hipjointpathology-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	Theankleandfootcomplex.:structureandfunctionoftheanklejoint,subtalarjoint,talocalcaneonaviculajoint,transversetarsaljoint,tarsometatarsaljoints, metatarsophalangealjoints,interphalangealjoints,structure and functionof the plantar arches,muscles of the ankle and foot,deviations from normal structure and function– Pes Planus and PesCavus	
	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 kineticsof gait, energyrequirements, ,.	
	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			
	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. 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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
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 : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
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 Mappi

					ng
	Unit 1	**Introduction to Exercise Therapy**			
	A	IntroductiontoExerciseTherapy-TheaimsofExerciseTherapy,ThetechniquesofExercise Therapy, Approach to patient's problems, Assessment of patient's condition –			CO1, CO2
	B	Measurements of Vital parameters			
	C	Starting Positions–Fundamental positions & amp; derived Positions, Planning of Treatment			
	Unit 2	**MethodsofTesting**			
	A	Measurement of Joint range by Goniometer			
	B	Tests for neuromuscular efficiency-Electric Test, MMT, Anthropometric Measurement, Static power Test, Dynamic powerTest,Endurance testSpeed test, Co-ordination & sensation test,Pulmonary Function tests			CO1, CO5
	C	MeasurementofLimbLength:truelimblength,apparentlimblength,segmentallimblength, Measurement ofthe angleofPelvicInclination			
	Unit 3	**Relaxation Therapy**			
	A	Definitions:MuscleTone,Posturaltone,VoluntaryMovement,Degreesofrelaxation, 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,Mitchel'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			
	Weightag	CA	MTE	ETE	

	e Distribution	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 References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3	PSO4
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 : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:		**Semester:3rd**
1	Course Code	BPT 259
2	Course Title	Biomechanics & Kinesiology(l]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 kineticsof 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.			

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	2	3	3	3	3	3	3	3	3	2	2

TEMPLATE:PRACTICAL

School: SAHS		**Batch : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:SAHS		**Semester:3rd**
1	Course Code	BPT260
2	Course Title	Foundation of Exercise Therapy & soft Tissue Manipulation(LAB)
3	Credits	2
4	Contact Hours (L-T-P)	0-0-4
	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,vital parameters 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	Brief	CO1, CO2
	B	Measurements of Vital parameters	
	C	Demonstrate Starting Positions–Fundamental positions & amp; derived Positions, Planning of Treatment	
	Unit 2	**MethodsofTesting**	
	A	Measurement of Joint range by Goniometer	
	B	Demonstrate MMT, Anthropometric Measurement, Static power Test, Dynamic powerTest,Endurance testSpeed test, Co-ordination & sensation test,Pulmonary Function tests	CO1, CO5
	C	Measuremen tof LimbLength:truelimblength,apparentlimblength,segmentallimblength, Measurement of the angleofPelvicInclination	
	Unit 3	**Relaxation Therapy**	
	A	Brief	CO1,CO4
	B	Methods of relaxation	
	C	Demonstration of relaxatation 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 : 2018-22**
Program: BPT	**Current Academic Year: 2019-20**
Branch:SAHS	**Semester:4th**

1	Course Code	BPT 219	
2	Course Title	EXERCISE THERAPY	
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	CO1, CO2
	B	Proprioceptive NeuromuscularFacilitation	
	C	Functional Re-education	
	Unit 2		

	A	Aerobic Exercise			
	B	Stretching			CO1, CO3
	C	Manual Therapy &Peripheral JointMobilization			
	Unit 3				
	A	Balance			CO2,CO5
	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,CyriaxNeuro Dynamic Testing			
	Unit 5				
	A	Hydrotherapy			CO2,CO3
	B	Individual and GroupExercises			
	C	Introduction toYoga			
	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. Margarett Hollis, Massage for therapist: Margarett 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

School: SAHS		**Batch : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
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	**LOW FREQUENCY CURRENTS**	
	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	**ELECTRO-DIAGNOSIS**	
	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	CO1, CO3

		equipment. .			
	C	Bio-feedback			
	Unit 3	**MEDIUM FREQUENCY CURRENTS**			**CO1,CO2**
	A	InterferentialTherapy:DefineIFT,Principleof ProductionofIFT,Physiological & Therapeutic effects,Indications&Contraindications.			
	B	RussianCurrent			
	C	ReboxtypeCurrent			
	Unit 4	**THERMO&ACTINOTHERAPY(HIGH FREQUENCY CURRENTS)**			**CO1,CO3**
	A	SWD, Pulsed ElectroMagnetic Energy, MicroWaveDiathermy:- PrincipleofProduction,Method,Types,Physiological&Therapeutice ffects,Indications & Contraindications,Dangers,Dosage parameters.			
	B	Ultrasound, IRR, UVR:PrincipleofProduction,Method,Types,Physiological&Therap euticeffect Indications & Contraindications,Dangers,Dosage parameters			
	C	LASER: PrincipleofProduction,Method,Types,Physiological&Therapeutice ffect Indications & Contraindications,Dangers,Dosage parameters			
,	**Unit 5**	**SUPERFICIAL HEATING MODALITIES**			**CO1,CO2, CO3**
	A	WaxTherapy, Contrast Bath, MoistHeatTherapy MethodofApplication,TherapeuticUses,Indications&Contr aindications.			
	B	Fluidotherapy, WhirlPoolBath MethodofApplication,TherapeuticUses,Indications&Contraindicati ons			
	C	Cryotherapy:Principle,Physiological Therapeuticseffects, Techniques ofApplications, Indications& Contraindications, Dangers, Methods of application withdosages.			
	Mode of examinat ion	Theory/Jury/Practical/Viva			
	Weightag e	CA	MTE	ETE	
		30%	20%	50%	

	Distribution				
	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	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 : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:SAHS		**Semester:4th**
1	Course Code	BPT 218
2	Course Title	MEDICAL PHYSIOTHERAPY LAW&ETHICS
3	Credits	4
4	Contact Hours (L-T-P)	3-1-O
	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	CO1: On completion of the course the students should be able to know the

	Outcomes	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 ofconduct	CO1, CO2
	B	Basicprinciples ofmedical ethics–Confidentiality	
	C	Malpractice and negligence-Rationaland irrationaldrugtherapy	
	Unit 2	**Autonomy and informed consent-Rightof 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	Medicolegalcaseandtype-Recordsanddocument relatedto MLC- ownershipof medicalrecords-	CO1,CO4
	B	ConfidentialityPrivilegecommunication	
	C	Releaseof medicalinformation- Unauthorizeddisclosure-retentionof medicalrecords- other variousaspects.	
	Unit 4	**Professional Indemnity insurance policy**	
	A	Development of standardized protocol to avoid near missor sentinel events	
	B	Obtaining an informedconsent	
	C	Biomedical ethical principles	
	Unit 5		**CO1,CO3,CO5**
	A	Code of ethics forphysiotherapists	
	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

SEMESTER 4
Template 4 PRACTICAL

School: SAHS		**Batch : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:SAHS		**Semester:4th**
1	Course Code	BPT 264
2	Course Title	EXERCISE THERAPY
3	Credits	3
4	Contact Hours (L-T-P)	0-0-6
	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,CO5
	B	Demonstrate exercise for training Co-ordination	
	C	Assess Posture	
	Unit 4		

	A	Demonstrate different WalkingAids			CO4,CO5
	B	Demonstrate Manual therapy			
	C	Demonstrate Maitland,mulligan,Mckenzie,MuscleEnergyTechnique,Myofascialstretching,CyriaxNeuro Dynamic Testing			
	Unit 5				
	A	Demonstrate Hydrotherapy			CO2,CO3
	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			

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 : 2018-22**
Program: BPT		**Current Academic Year: 2019-20**
Branch:SAHS		**Semester:4th**
1	Course Code	BPT 265
2	Course Title	ELECTROTHERAPY
3	Credits	3
4	Contact Hours (L-T-P)	0-0-6
	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	**LOW FREQUENCY CURRENTS**			
	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	**ELECTRO-DIAGNOSIS**			
	A	Demonstrate FGTest.			
	B	Plotting of SD curve with chronaxia and rheobase			CO1, CO3
	C	Application of Bio-feedback			
	Unit 3	**MEDIUM FREQUENCY CURRENTS**			**CO1,CO2**
	A	Brief			
	B	Demonstration the methods			
	C	Application of electrodes in various regions			
	Unit 4	**THERMO&ACTINOTHERAPY(HIGH FREQUENCY CURRENTS)**			**CO1,CO3**
	A	Demonstrate treatment technique of SWD, Pulsed ElectroMagnetic Energy,			
	B	Application of Ultrasound, IRR, UVR for different regions			
	C	Aplication of LASER for different regions			
,	**Unit 5**	**SUPERFICIAL HEATING MODALITIES**			**CO1,CO2,CO3**
	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 ofApplications			
	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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th**
1	Course Code	BPT 310
2	Course Title	Clinical Orthopedics&Traumatology
3	Credits	3
4	Contact Hours (L)	3-0-0
	Course Type	Compulsory
5	Course	The objective of this course is that after 60 hrs of lectures and

	Objective	discussion the student will be able to demonstrate an understanding of orthopedic conditions causing disability, list the etiology, clinical features and methods of investigationsandmanagement.			
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	DiseaseofBonesandJoints			
	C	Congenitaland Acquireddeformities			
	Unit 2				
	A	InflammatoryandDegenerativeConditions			
	B	Neuromuscular Disorders			CO1, CO3
	C	Cervical andLumbar Pathology			
	Unit 3				
	A	Orthopedic Surgeries			
	B	RegionalConditions			
	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	

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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th**
1	Course Code	BPT 350
2	Course Title	Clinical Orthopedics&Traumatology (Practical)
3	Credits	1
4	Contact Hours (P)	0-0-2
	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 investigationsandmanagement.
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 managment. 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	DiseaseofBonesandJoints			
	C	Congenitaland Acquireddeformities			
	Unit 2				
	A	InflammatoryandDegenerativeConditions			
	B	Neuromuscular Disorders			CO1, CO3
	C	Cervical andLumbar Pathology			
	Unit 3				
	A	Orthopedic Surgeries			
	B	RegionalConditions			
	C	Syndromes			
	Mode of examination	Practical			
	Weightage Distribution	CA	MTE	ETE	
		60%	0%	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 : 2018-22**	
Program:		**BPT** **Current Academic Year: 2022-21**	
Branch:		**Semester: 5th semester**	
1	Course Code	BPT 309	
2	Course Title	General Surgery	
3	Credits	3	
4	Contact Hours (L)	3-0-0	
	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 investigationsandmanagement.	
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 andVeins			
	B	Disorders of the Heart			CO1, CO3
	C	Thoracic surgeries			
	Unit 3				
	A	Burn			CO4, CO5
	B	Disordersof the ChestWall, Lung and Mediastinum			
	C	Describethenormalandabnormalphysiologicalevent 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 andLove's – Short Practice of Surgery 4. Chest Disease by Crofton andDouglas. 5. Patrica 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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 359
2	Course Title	General Surgery (Practical)
3	Credits	1
4	Contact Hours (P)	0-0-2
	Course Type	Compulsory
5	Course	The objective of this course is that after 60 hrs of lectures and

	Objective	discussion the student will be able to demonstrate an understanding of surgical conditions causing disability, list the etiology, clinical features and methods of investigationsandmanagement.			
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 andVeins			
	B	Disorders of the Heart			CO1, CO3
	C	Thoracic surgeries			
	Unit 3				
	A	Burn			CO4, CO5
	B	Disordersof the ChestWall, Lung and Mediastinum			
	C	Describethenormalandabnormalphysiologicalevent 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 andLove's – Short Practice of Surgery 4. Chest Disease by Crofton andDouglas. 5. Patrica 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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 308
2	Course Title	General Medicine,Paediatrics&psychiatry
3	Credits	3
4	Contact Hours (L)	3-0-0
	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 the treatment CO2 : To understand pathophysiological changes in respiratory disorders with their treatment CO3 : To understand pathophyisological 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	CA	MTE	ETE	

	Distribution	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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 358
2	Course Title	General Medicine,Paediatrics&psychiatry (Practical)
3	Credits	1
4	Contact Hours (P)	0-0-2
	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 the treatment CO2 : To understand pathophysiological changes in respiratory disorders with their treatment

		CO3 : To understand pathophyisological 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*	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 4 (1)

School:		**Allied health science** **Batch : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 311
2	Course Title	CommunityMedicine
3	Credits	4
4	Contact Hours (L)	4-0-0
	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	Theory			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	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 : 2018-22**

Program:		BPT			Current Academic Year: 2022-21
Branch:		Semester: 5th semester			
1	Course Code	BPT 351			
2	Course Title	CommunityMedicine (Practical)			
3	Credits	1			
4	Contact Hours (P)	0-0-2			
	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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 312
2	Course Title	Interpretation of Diagnostic imaging technology
3	Credits	2
4	Contact Hours (L)	2-0-0
	Course Type	Compulsory
5	Course Objective	This course covers the study of commondiagnostic 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 howX-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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 5th semester**
1	Course Code	BPT 352
2	Course Title	Interpretation of Diagnostic imaging technology (Practical)
3	Credits	1
4	Contact Hours	0-0-2

	(P)				
	Course Type	Compulsory			
5	Course Objective	This course covers the study of commondiagnostic 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 howX-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 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 1 (1)

School:		**Allied health science**	**Batch : 2018-22**
Program:		**BPT**	**Current Academic Year: 2020-21**
Branch:		**Semester: 6th semester**	
1	Course Code	BPT 312	
2	Course Title	PhysiotherapyinOrthopedics& sports	
3	Credits	5-0-0	
4	Contact Hours (L)	5	
	Course Type	Compulsory	
5	Course Objective	Theobjectiveofthe courseisthatafterthespecifiedhours oflectures and 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	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 Treament – 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 : 2018-22**	
Program:		**BPT** **Current Academic Year: 2020-21**	
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 Objective	Theobjectiveofthe courseisthatafterthespecifiedhours oflectures and 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 Treament – 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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 6th semester**
1	Course Code	BPT 313
2	Course Title	Physiotherapy in General Surgery and General Medicine
3	Credits	5
4	Contact Hours	5

	(L)				
	Course Type	Compulsory			
5	Course Objective	Acquire theknowledge of evaluation and physiotherapeutic treatment for obstetric and gynecologicalconditions Acquiretheknowledgeofvariousconditionswherephysiotherapyplaysavitalroleinthe rehabilitation			
6	Course Outcomes	The student will be able to: CO1 : To understand pathophysiological changes in infectious and metabolic disorders with the PT treatment CO2 : To understand pathophysiological changes in respiratory disorders with their PT treatme CO3 : To understand pathophyisological 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 Identifydiscussandanalyzecardiovascularandpulmonarydysfunction. Acquireknowledgeofrationalofbasicinvestigativeapproachesinthemedicalsystemandsurgical intervention.			
8	Outline syllabus				CO Mapping
	Unit 1				
	A	Physiotherapyinmotherandchildcare			CO1, CO2
	B	Geriatrics			
	C	Abdominal incisions and complications of operations			
	Unit 2				
	A	Physiotherapy in pre andpost-operativestages			
	B	Operationson upper G.I.T.-esophagus,stomach, duodenum			CO1, CO3
	C	Operationson large and small intestine and PT in dentistry			
	Unit 3				CO4, CO5
	A	Burnsand itstreatment			
	B	Managementofwoundulcers 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 Treament – 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 : 2018-22**
Program:		**BPT**	**Current Academic Year: 2020-21**
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 theknowledge of evaluation and physiotherapeutic treatment for obstetric and gynecologicalconditions Acquiretheknowledgeofvariousconditionswherephysiotherapyplaysavitalroleinthe 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 pathophyisological 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 Identifydiscussandanalyzecardiovascularandpulmonarydysfunction. Acquireknowledgeofrationalofbasicinvestigativeapproachesinthemedicalsystemandsurgical intervention.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Physiotherapyinmotherandchildcare	CO1, CO2
	B	Geriatrics	
	C	Abdominal incisions and complications of operations	
	Unit 2		

	A	Physiotherapy in pre andpost-operativestages			
	B	Operationson upper G.I.T.-esophagus,stomach, duodenum			CO1, CO3
	C	Operationson large and small intestine and PT in dentistry			
	Unit 3				CO4, CO5
	A	Burnsand itstreatment			
	B	Managementofwoundulcers and PT in derma			
	C	ENT 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 Treament – 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 : 2018-22**
Program:		**BPT** **Current Academic Year: 2020-21**
Branch:		**Semester: 6th semester**
1	Course Code	BPT 314
2	Course Title	Clinical Neurology& Neurosurgery
3	Credits	3
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 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. An understanding of the approach of neurologists to the health care of people with neurologic conditions. Begin to understand an educational plan for continuous learning throughout the professional career. An understanding of the influence of family, community, and society in the care of people with neurological	
6	Course Outcomes	The student will be able to: CO1:To understand pathophysiological changes in neurological disorders with their treatment CO2:To understand the management of various neurosurgeries CO3:clinical decision making ability and management expertise CO4:Plan a better rehabilitation care for patiemts pre and postneurosurgery CO5: To understand the management of various neurological condition and its treatment	
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,andimbalance	
	Unit 2		
	A	Cerebro-vasculardiseases	
	B	Lowercranial nerveparalysis	CO1, CO3
	C	Head injury, metabolic, environmental disorders	
	Unit 3		CO4, CO5
	A	Movement and cerebral disorders	
	B	Cerebellarandcoordinationdisorders	
	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 pedriatric disorders	
	Mode of	Theory	

	examination				
	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 : 2018-22**
Program:		**BPT Current Academic Year: 2020-21**
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	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. An understanding of the approach of neurologists to the health care of people with neurologic conditions. Begin to understand an educational plan for continuous learning throughout the professional career. An understanding of the influence of family, community, and society in the care of people with neurological
6	Course Outcomes	The student will be able to: CO1:To understand pathophysiological changes in neurological disorders with their treatment

		CO2:To understand the management of various neurosurgeries CO3:clinical decision making ability and management expertise CO4:Plan a better rehabilitation care for patiemts pre and postneurosurgery CO5: To understand the management of various neurological condition and its treatment			
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,andimbalance			
	Unit 2				
	A	Cerebro-vasculardiseases			
	B	Lowercranial nerveparalysis			CO1, CO3
	C	Head injury, metabolic, environmental disorders			
	Unit 3				CO4, CO5
	A	Movement and cerebral disorders			
	B	Cerebellarandcoordinationdisorders			
	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 pedriatric 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 : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2023-22**
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	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. 2. Students will understand the role exercise therapy, electrotherapy and recent therapeutic advancement in clinical situation to restore neurological function. 3.In addition, the student will be able to diagnose the conditions.
6	Course Outcomes	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. 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. CO3:Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular. 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.
7	Course Description	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.

8	Outline syllabus		CO Mapping
	Unit 1	Neurological Assessment	
	A	Required materials forexamination, Chief complaints, History taking–Present,Past medical,familial,personalhistories,Observation,Palpation,Higher mentalfunction– Consciousness,Orientation,Wakefulness,memory,Speech, Reading, Language, Writing, Calculations,Perception,Leftrightconfusion,Reasoning,andJudgment	CO1, CO2
	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, BrudenzkI 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. Differentialdiagnosis.	CO1,CO2
	Unit 2	NeurophysiologicalTechniques	
	A	Concepts,Principles,Techniques,Effectsoffollowing Neurophysiological techniques: NDT ,PNF, Vojta therapy	CO1, CO3
	B	Rood's Sensorymotor Approach, Sensory Integration Approach, Brunnstorm movement therapy, Motor relearning program.	CO1, CO3
	C	Contemporary task oriented approach, Muscle re-education approach and Constraint induced movementtherapy.	CO1, CO3
	Unit 3	Paediatric Neurology	
	A	Developmentalmilestones,developmental reflexes,Neuro developmentalscreeningtests.Evaluation &Management- History, Observation,Palpation,MilestoneExamination, developmentalreflexExamination,Higher mentalfunction, Cranialnerveexamination	CO2,CO4
	B	Motor&Sensoryexamination,Reflextesting, differentialDiagnosis,Balance&Coordinationexamination, Gaitanalysis,Functionalanalysis, Listof Problems & Complications,short &LongTermgoals	CO2,CO4
	C	Managementof systemic	CO2,CO4

		complications,ManagementofMechanical Complications,UseofvariousNeurophysiological approaches&Modalities inRiskbabies,Minimumbraindamage,Developmental disorders, Cerebralpalsy, Autism,Down'sSyndrome,Hydrocephalus,Chorea,Spinabifida,andsyringomyelia.	
	Unit 4	Evaluation and Management	
	A	BrainandSpinalCordDisorders:History,Observation, Palpation,Highermental function,Cranialnerveexamination,Motor&Sensory examination, Reflextesting,differentialDiagnosis,Balance&Coordination examination,Gaitanalysis, Functional analysis,ListofProblems&Complications,short&LongTermgoals,Managementofsystemic complications,ManagementofMechanicalComplications,Useof variousNeurophysiologicalapproaches&ModalitiesinCerebrovascular Accident,Meningitis, Encephalitis,Head Injury,BrainTumors,Perceptualdisorders,Amyotrophiclateralsclerosis, and Multiplesclerosis.	CO1,CO4
	B	Cerebellar, Spinal Cord andMuscle Disorders : History,Observation,Palpation,Motor &Sensoryexamination, Reflextesting,differentialDiagnosis, Balance&Coordination examination,Gaitanalysis,Functionalanalysis,ListofProblems&Complications,short &Long Term goals, Management of systemic complications, ManagementofMechanicalComplications,Useofvarious Neurophysiologicalapproaches&ModalitiesinAtaxia, SensoryAtaxia, Parkinson'sdisease,Musculardystrophy(DMD), MyastheniaGravis, Eaton-Lambert Syndrome,Spinaltumors,Spinalcordinjury,Transverse myelitis,Bladder &BowelDysfunction,Spinalmuscular atrophies,Poliomyelitis,Post-PolioSyndrome.	CO1,CO4
	C	1. Peripheral Nerve Injuries and Disorders :History, Observation,Palpation,Motor &Sensoryexamination, Reflextesting,differentialDiagnosis, Balance&Coordination examination,Gaitanalysis,Functionalanalysis,ListofProblems&Complications, short &Long Term goals, Management of	CO1,CO4

		systemic complications, ManagementofMechanicalComplications,Useofvarious Neurophysiologicalapproaches&Modalities inHereditarymotor sensory neuropathy,Guillain-Barresyndrome,Brachialplexus palsy,Thoracicoutletsyndrome,Lumbosacralplexuslesions,Phrenic& intercostalsnerve lesions,Median nervepalsy,Ulnar nervepalsy,Radialnervepalsy,Musculocutaneousnerve palsy,Anterior &Posterior interosseous nervepalsy,Axillarynervepalsy,Longthoracicnerve palsy,Suprascapularnervepalsy,sciaticnervepalsy,Tibialnerve palsy,Commonperoneal nervepalsy,Femoral nervepalsy,Obturatornervepalsy, and Pudentalnervepalsy.	
	Unit 5	Assessment and management of Neurological gaits	
	A	QuantitativeandQualitative(Kinetic&Kinematics) analysis,Listof Problems,short&LongTermgoals,Managementof following NeurologicalGaits-Hemiplegicgait,Parkinsongait,Highstepgait, Hyperkineticgait, Hypokineticgait, Waddlinggait,Scissoringgait,Spasticgait, ChoreaformGait,DiplegicGait, and MyopathicGait.	CO3,CO4
	B	Preandpostsurgicalassessmentandtreatmentfollowingconditions-Spinaldischerniation, Spinalstenosis,Spinalcordtrauma,Headtrauma, Braintumors,Tumorsofthespine,Spinal cord and peripheral nerves, Cerebral aneurysms, Subarachnoid hemorrhages, epilepsy, Parkinson's disease,Chorea,Hemiballism,Psychiatricdisorders, Malformations of thenervous system, Carotid artery stenosis,Arteriovenousmalformations, andSpinabifida.	CO3,CO4
	C	Applied Yogain Neurologicalconditions.	CO3,CO4
	Mode of examination	Theory/Jury/Practical/Viva	
	Weightage Distribution	CA | MTE | ETE	
		30% | 20% | 50%	
	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. 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

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

School: School Of Allied Health Sciences			**Batch : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2021-22**	
Branch: Physiotherapy		**Semester:VII**	
1	Course Code	BPT 462	
2	Course Title	BIOSTATISTICS &RESEARCHMETHODOLOGY	
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 researchfindings.	
8	Outline syllabus		CO Mapping
	Unit 1		
	A	Introduction toResearch methodology: Meaning of research, objectives of research, Motivationinresearch,Typesof research&research approaches, Researchmethods vs methodology,Criteriaforgoodresearch,Problemsencounteredbyresearchersin India.	CO1, CO2
	B	Researchproblem:Statementofresearchproblem.Statementofpurposeando	CO1,CO2

		bjectivesof research problem, Necessity of definingtheproblem.	
	C	Researchdesign:Meaningofresearchdesign,Need forresearchdesign,Featuresforgooddesign, Different research designs, Basicprinciples ofresearchdesign.	CO1,CO2
	Unit 2		
	A	SamplingDesign:Criteriaforselectingsamplingprocedure,Implicationsforsampledesign, stepsinsamplingdesign,characteristicsofgoodsampledesign,Differenttypesofsampledesign	CO2,CO3
	B	Measurement&scalingtechniques:Measurement inresearch- Measurementscales,sources of error inmeasurement,Techniqueofdevelopingmeasurementtools,Meaningofscaling,its classification.Importantscalingtechniques.	CO1, CO3
	C	Methodsofdatacollection:collectionof primarydata,collectiondatathroughquestionnaires&schedules, Difference betweenquestionnaires&schedules.	CO2,CO3
	Unit 3		
	A	Samplingfundamentals,needforsampling&somefundamentaldefinitions,importantsampling distributions.	CO3,CO4
	B	Processing&analysisofdata:Processingoperations,problemsinprocessing, Typesof analysis, Statisticsin research, Measures of central tendency, Dispersion, Asymmetry, relationship.	CO1, CO3
	C	Testingofhypothesis:Whatishypothesis.Basicconceptsconcerningtestingofhypothesis, Procedureofhypothesistesting,measuringthepowerofhypothesistest,Testsofhypothesis, limitationsof thetestsofhypothesis Computer technology:IntroductiontoComput	CO3,CO4

		ers, computerapplicationinresearch, computers&researcher.	
	Unit 4		
	A	Introduction:Meaning,definition,characteristicso fstatistics.,Importanceofthestudyof statistics, Branches of statistics, Statistics and health science including physiotherapy, Parameters andEstimates,Descriptiveandinferentialstatistics, Variablesandtheirtypes, Measurementscales.	CO4,CO5
	B	Tabulation ofData: Basic principles of graphical representation, Types of diagrams – histograms, frequencypolygons, smooth frequency polygon, cumulative frequency curve, Normalprobabilitycurve.	CO4,CO5
	C	Measure ofCentral Tendency: Need for measures of central Tendency, Definition and calculationof mean–ungrouped andgrouped,Meaning,interpretation andcalculationof medianungrouped andgrouped.Meaningand calculationofmode, Comparisonofthemean, medianandmode,Guidelinesfortheuseofvariou smeasuresofcentraltendency.	CO4,CO5
	Unit 5		
	A	ProbabilityandStandardDistributions:Meaningof probabilityofstandarddistribution,thebinominald istribution,thenormaldistribution,Divergencefr omnormality–skewness,kurtosis. Samplingtechniques:Needforsamplin g- Criteriaforgoodsamples,Applicationo fsampling incommunity,Proceduresofsamplinga ndsamplingdesignserrors,Samplingva riationandtestsofsignificance.	CO5,C06
	B	Analysisofvariance&covariance:Ana	CO5,C06

		lysisofvariance(ANOVA),whatisANOVA?Basic principleofANOVA,ANOVAtechnique,AnalysisofCovariance(ANACOVA).			
	C	Formatofscientificdocuments.(Structureofprotocols,formatsreportinginscientificjournals, systematic reviewsandmeta-analysis).			CO5,C06
	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 : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2021-22**
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	1.To provide understanding of personal health risks. 2.To provide understanding of how psychological and emotional health are connected to overall well being. 3.Health risks, screening, and assessment considering epidemiological principles are emphasized. 4.Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.
6	Course Outcomes	CO1:The role of health,nutrition,physical activity and wellness in daily life. CO2:Awareness about how psychological and emotional health are connected to our overall well being and health. CO3:Able to identify personal health risks based upon current lifestyle choices CO4:Identify and implement lifestyle changes that will enhance lifelong health. CO5:Evaluation and adaptation of health behaviors and lifestyle.
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 arecovered.			
8	Outline syllabus				CO Mapping
	Unit 1	Prevention practice :a holistic perspective for physiotherapy			
	A	Defining Health Predictionsof Health Care			CO1, CO2
	B	Comparing Holistic Medicine andConventional Medicine			CO1, CO2
	C	DistinguishingThreeTypesofPreventionPractic e.			CO1, CO2
	Unit 2	HealthyPeople			
	A	Definitionof healthypeople			CO2,CO3
	B	HealtheducationResources			CO1, CO3
	C	Physiotherapist role for a healthy community.			CO2,CO3
	Unit 3	Keyconceptsoffitness			
	A	Defining & Measuring Fitness b.Assessmentof Stresswith a Survey			CO3,CO4
	B	Visualizing Fitness Screening for Mental andPhysical Fitness			CO2,C03
	C	Body Mass Index calculations.			CO3,C04
	Unit 4	Fitnesstraining			
	A	Physical Activities Readiness Questionnaire			CO5,CO1
	B	PhysicalActivities Pyramid Exercise Programs			CO5,CO1
	C	Evidence-Based Practice.			CO5,CO1
	Unit 5	Health, fitness, and wellness			
	A	During childhood andadolescence			CO4,C05
	B	Health, fitness, and wellnessduringadulthood. Women'shealth issues: focus onpregnancy. Health protection. Prevention practice for musculoskeletal conditions Prevention practice forcardiopulmonary conditions Prevention practice forneuromuscular conditions Prevention practice forintegumentary disorders Prevention practice forindividualswith developmental disabilities.			CO4,C05
	C	Prevention practice forolderadults Resources tooptimizehealth. 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 : 2018-22**
Program: Bachelor's of Physiotherapy		**Current Academic Year: 2021-22**
Branch: Physiotherapy		**Semester:VII**
1	Course Code	BPT464
2	Course Title	**CLINICALCARDIOVASCULAR AND PULMONARY**
3	Credits	3
4	Contact	3-0-0

	Hours (L-T-P)		
	Course Type	DSE	
5	Course Objective	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	The student will be able to: CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions. 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. CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function. CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.	
7	Course Description	Following the basic science and clinical science course,this course introduces the Student in cardio-thoracic conditions which commonlycause disability. 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. 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.	
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 ofrespiration Pleura, intra pleural space,intrapleural pressure,surfactant	CO1, CO2
	B	Cardio vascular systems Chambers of heart, semi lunar and atriaventricular valves Coronary circulation, conductive system of heart, Cardiac cycle, ECG, Heart sounds	CO1, CO2

		Blood pressure, pulse,cardiacoutput.	
	C	Mechanics ofrespiration – Chest wall movements, lung &chest wall compliance V/Q relationship, airwayresistance Respiratory centre,	CO1, CO2
	Unit 2	Cardio Vascularsystem	
	A	Define,etiology,pathogenesis,clinicalfeatures,complications,	CO1, CO3
	B	Conservativeand surgicalmanagement of the following conditions- Ischemiaheartdisease Myocardial infarction Heartfailure Cardiacarrest Rheumatic fever Hypertension Infectiveendocarditis Myocarditis&cardiomyopathy	CO1, CO3
	C	CardiovascularDisease:ExaminationoftheCardiovascularSystemInvestigations: ECG,ExerciseStressTesting,Radiology; Clinical manifestations of Cardiovascular disease;Definition,Etiology,Clinicalfeatures,signs andsymptoms,complications, management and treatment of following diseases and disorders of the heart: Pericarditis,Myocarditis,Endocarditis,Rheumatic Fever– resultinginvalvedisorders, Ischemic Heart Disease,CoronaryValve Disease, Congenital disorders of the Heart, CardiacArrest;Examination and Investigations of diseases of arteries and veins ;Hypertension:Definition,causes,classification,types,assessment,investigations and management. DisordersoftheHeart–Definition,Clinical features,diagnosis andchoiceof managementfor thefollowingdisorders: CongenitalHeartdiseases– Acyanotic congenital heart disease & Cyanotic congenital heart disease:Patent Ductus Arteriosus, Coarctation of Aorta,Atrial Septal Defect,Ventricular Septal Defect, Tetraology of Fallot,Transposition of GreatVessels ; AcquiredHeart Disease–Mitral Stenosis & Insufficiency,Aortic Stenosis and Insufficiency, Ischemic Heart Disease– Coronary Artery Disease,Cardiac tumors.	CO1, CO3
	Unit 3	**RESPIRATORY SYSTEM**	
	A	RespiratoryDisease:ExaminationoftheRespiratorySystem– Investigations:ChestRadiographs,PulmonaryFunctionTesting, Arterial Blood Gas Analysis;Clinical manifestations of Lung	CO2,CO3

		disease			
	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, UpperRespiratoryTractInfections,Pneumonia,Tuberculosis,FungalDiseases, Interstitial Lung Diseases, Diseases of the pleura, diaphragm and chest wall.			CO2,CO3
	C	Respiratory failure– Definition,types,causes, clinicalfeatures,diagnosis andmanagement.			CO2,CO3
	Unit 4	Chest wall disorders			
	A	Definition,Clinicalfeatures,diagnosis andchoiceofmanagement 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 tumorsof the Lung, tracheal Stenosis, Congenital tracheomalacia			CO3,CO4
	C	Neoplasmsofthe trachea, Lesionsof the Mediastinum. Carcinoma of thefemalebreast.			CO3,CO4
	Unit 5	**REGULATION OF RESPIRATION**			
	A	Neural&chemical regulation ofrespiration.			CO4,CO5
	B	Lung volumesand lung capacities, Spiro meter, lungfunction 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*	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

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

School: School of allied health sciences		**Batch: 2018-22**
Program: Bachelor's of Physiotherapy		**Current Academic Year:2021-22**
Branch:Physiotherapy		**Semester:VII**
1	Course Code	BPT465
2	Course Title	Principles of Management, Critique inquiry, case presentation anddiscussion
3	Credits	1
4	Contact Hours	1-0-0

	(L-T-P)		
	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 tomanagement	CO1, CO2
	B	StrategicManagement	CO1, CO2
	C	Theories of management	CO1, CO2
	Unit 2	**TOOLS AND TECHNIQUES OF PLANNING**	
	A	Defination ofPlanning	
	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 GroupsandTeams	CO3,CO4
	C	Managing Changeand 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 EFFICIENCEY**	
	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: 2018-22**
Program: Bachelor's of physiotherapy	**Current Academic Year: 2021-22**

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	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. 2. Students will understand the role exercise therapy, electrotherapy and recent therapeutic advancement in clinical situation to restore neurological function. 3.In addition, the student will be able to diagnose the conditions.	
6	Course Outcomes	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. 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. CO3:Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular. 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.	
7	Course Description	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.	
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: 60% / MTE: 0% / ETE: 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 : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2021-22**
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. 2.To provide understanding of how psychological and emotional health are

		connected to overall well being. 3.Health risks, screening, and assessment considering epidemiological principles are emphasized. 4.Risk reduction strategies for primary and secondary prevention, including programs for special populations are covered.	
6	Course Outcomes	CO1:The role of health,nutrition,physical activity and wellness in daily life. CO2:Awareness about how psychological and emotional health are connected to our overall well being and health. CO3:Able to identify personal health risks based upon current lifestyle choices CO4:Identify and implement lifestyle changes that will enhance lifelong health. CO5:Evaluation and adaptation of health behaviors and lifestyle.	
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 arecovered.	
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	
		4. Defining & Measuring Fitness b.Assessmentof Stresswith a Survey 5. Visualizing Fitness, Screening for Mental and Physical Fitness 6. Body Mass Index calculations.	CO3,C04
	Unit 4	Fitnesstraining	
		1. Physical Activities Readiness Questionnaire 2. Physical Activities Pyramid 3. Exercise Programs, Evidence-Based	CO4,CO5

		Practice	
	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: 2018-22**
Program: Bachelor's of Physiotherapy		**Current Academic Year: 2021-22**
Branch: Physiotherapy		**Semester:VII**
1	Course Code	BPT443
2	Course Title	**CLINICALCARDIOVASCULAR AND PULMONARY(PRACTICAL)**
3	Credits	1
4	Contact Hours (L-T-P)	0-0-2
	Course Status	DSE
5	Course	1. The objective of this course is that after lectures, demonstrations,

	Objective	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	The student will be able to: CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions. 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. CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function. CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.	
7	Course Description	Following the basic science and clinical science course,this course introduces the Student in cardio-thoracic conditions which commonlycause disability. 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. 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.	
8	Outline syllabus		CO Mapping
	Unit 1	**Cardiopulmonary Assessment**	
		1. Brief 2. Demonstration 3. Assesment tools and techniques,outcome measures.	CO1,C02
	Unit 2	**Physiotherapy Techniques**	
		1. Brief,demonstration 2. Drug therapy 3. Neonatal techniques	CO2,C03
	Unit 3	**Pulmonary Rehabilitation**	

		1. Brief 2. Demonstration 3. Experimentation	CO3,C04
	Unit 4	**Physiotherapy following lung surgeries**	
		1. Brief 2. Rehabilitation Protocol 3. Techniques	CO1,CO2
	Unit 5	**Abdominal surgeries & amputation**	
		1. Brief 2. Rehabilitation Protocol 3. Techniques	CO1,CO5
	Mode of examination	Practical/Viva	
	Weightage Distribution	CA: 60% / MTE: 0% / ETE: 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 refrences	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 : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2021-22**
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	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 choosen topics.
6	Course Outcomes	CO1:To be able to apply the gained knowledge in clinical setup. 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. CO3:To be able to utilize the gained knowledge practically and in hospital setup. CO4:Present and be able to utilize their rationale, approach or methodology, outcomes and conclusions. CO5:To be able to enhance practical knowledge,professional approach,academic rigour,independence and self direction.

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 choosen topics.	
8	Outline syllabus		CO Mapping
	Unit 1	Musculoskelatal physiotherapy	
		Brief. Demonstration. Experimentation.	CO1,CO2
	Unit 2	Cardio pulmonary physiotherapy	
		Brief Demonstration Experimentation	CO2,C03
	Unit 3	Electrotherapy	
		Brief Demonstration able to utilize modalities	CO3,C04
	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	ETE	
	100%	0%	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
2CO201.2	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: 2018-22**
Program: Bachelor's of physiotherapy		**Current Academic Year:2021-22**
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	1. To provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. 2. Thestudentmustbe abletoreassess thepatientas necessary,tomonitor thepatientinregardtotreatment,tomonitor the patient'svital signs. 3. Student must know emergency drugs indication and contra-indication, car ein intensive care unit (ICU) and to provide appropriate interventions to thepatient.
6	Course Outcomes	CO1: Interpretation of different invasive and non invasive diagnostic investigation to make proper assessment in various respiratory and cardiovascular dysfunction CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions. 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. CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function. CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.
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 thepatient.
8	Outline syllabus	CO Mapping

	Unit 1	**ASSESSMENT**	
	A	AnatomicalandPhysiologicaldifferencesbetweentheAdultandPediatriclung. Bedside assessment of the patient-Adult &Pediatric. CardiacRehabilitation.,Physiotherapy management following PVD.	CO1, CO2
	B	InvestigationsandtestsExercisetoleranceTesting– Cardiac&Pulmonary,Radiographs, PFT, ABG, ECG, HematologicalandBiochemicalTests.	CO2, CO3,
	C	Physiotherapytechniques toincreaselungvolume– controlledmobilization,positioning,breathingexercises, Neurophysiological Facilitation of Respiration,	CO3,CO4
	Unit 2	**Physiotherapy Techniques**	
	A	Physiotherapy techniquestodecrease theworkofbreathing – Measurestooptimize the balancebetween energysupply and demand, positioning, Breathingre-education– Breathing control techniques, mechanical aids – IPPB, CPAP, BiPAP. Physiotherapytechniquestoclearsecretions– Hydration,Humidification&Nebulisation, MobilisationandBreathingexercises,PosturalDrainage,Manualtechniques –Percussion, Vibration and Shaking,RibSpringing,ACBT,AutogenicDrainage,MechanicalAids –PEP, Flutter, IPPB, Facilitation ofCough and Huff, NasopharyngealSuctioning.	CO4,CO5
	B	Drugtherapy– Drugsto preventandtreatinflammation,DrugstotreatBronchospasm,Drugstotreatbreathlessness,Drugstohelpsputumclearance, Drugstoinhibitcoughing,Drugsto improveventilation, Drugstoreducepulmonary hypertension,Drugdeliverydoses,Inhalers and Nebulisers.	CO1, CO3
	C	NeonatalandPediatricPhysiotherapy– Chestphysiotherapyforchildren,Theneonatalunit, Modificationsofchestphysiotherapyfor specificneonataldisorders,Emergenciesinthe neonatal unit.	CO1, CO2
	Unit 3	**PULMONARY REHABILITATION**	
	A	Physiotherapy in Obstructive lung conditions, PhysiotherapyinRestrictive lungconditions.	CO3,CO4
	B	Management ofbreathlessness.	
	C	Pulmonary Rehabilitation.	CO4,CO5
	Unit 4	**PHYSIOTHERAPY FOLLOLWING LUNG SURGERIES.**	
	A	Physiotherapy following Lung surgeries	CO1,

		Respiratory failure–Oxygen Therapy and Mechanical Ventilation.			CO2
	B	IntroductiontoICU:ICUmonitoring–Apparatus,AirwaysandTubesusedintheICU-PhysiotherapyintheICU– Common conditions intheICU–Tetanus,HeadInjury,Lung Disease,PulmonaryOedema,MultipleOrganFailure,Neuromuscular Disease,Smoke Inhalation,Poisoning,Aspiration,NearDrowning,ARDS,Shock;Dealing withanEmergency Situation in the ICU.			CO2, CO3,
	C	Physiotherapy management following cardiac surgeries.			CO3,CO4
	Unit 5	**ABDOMINAL SURGERIES & AMPUTATION**			
	A	AbdominalSurgeries-ManagementofPulmonaryRestorativeDysfunctionfollowingsurgical procedureson Abdomen and Thorax.			CO4,CO5
	B	ManagementofAmputationsfollowingDiabetes,PVD-Prosthesisinamputationsoflower limbsfollowing ulcersand gangrenes.			CO1, CO3
	C	Home program and education offamilymembersin patient care. Treatment,ResponsetoexerciseandImplicationsofPhysiotherapyinthefollowingdisease 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*	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: 2018-22**
Program: Bachelor's of Physiotherapy		**Current Academic Year: 2021-22**
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	1. To provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. 2. Thestudentmustbe abletoreassess thepatientas necessary,tomonitor thepatientinregardtotreatment,tomonitor the patient'svital signs. 3. Student must know emergency drugs indication and contra-indication, car ein intensive care unit (ICU) and to provide appropriate interventions to thepatient.
6	Course	CO1: Interpretation of different invasive and non invasive diagnostic

	Outcomes	investigation to make proper assessment in various respiratory and cardiovascular dysfunction CO2: Develops the skills to execute different Physiotherapy techniques used in treatment of Cardio-respiratory dysfunctions. 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. CO4: Be able to execute the effective Physiotherapeutic measures with appropriate clinical reasoning to improve pulmonary function. CO5: To design & execute effective tailored cardiopulmonary rehabilitation programme.	
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 thepatient.	
8	Outline syllabus		CO Mapping
	Unit 1	**Cardiopulmonary Assessment**	
		4. Brief 5. Demonstration 6. Assesment 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 : 2018-22**	
Program: Bachelor's of physiotherapy		**Current Academic Year: 2021-22**	
Branch: Physiotherapy		**Semester:VIII**	
1	Course Code	BPT467	
2	Course Title	Community Physiotherapy	
3	Credits	4	
4	Contact Hours (L-T-P)	4-0-0	
	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 duetovarious disease conditions and plan and set treatment goals and applytheskills gained in rehabilitating and restoring functions.	
8	Outline syllabus		CO Map ping
	Unit 1	Community Rehabilitation	
	A	Defination and definition of Community, Multiplicity of Communities. The	CO

		Community based approach, Community Entry strategies.	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,Historicalreview,Conceptof 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 DisabilityEvaluation**	
	A	Planning and management of CBR Programmes, CBR Programmed planning and management,OwnershipandGovernance,DecentralizationandCBR,Managementof CBR, Programmedsustainability,Communicationand Coordination, Communityparticipation, mobilization and awareness, CBRprogrammeinfluenceon promoting and developingpublic policies.	CO2 CO4
	B	Disability: Definition of Impairment, Handicap and Disability, Difference between impairment,handicapanddisability,Causesofdisability,Typesofdisability,Prevention ofdisability,Disabilityindevelopedcountries,Disabilityindeveloping countries.DisabilitySurveys:Demography.Screening:Earlydetection ofdisabilities anddevelopmentaldisorders, Prevention ofdisabilities-Typesand levels.	CO2 CO4
	C	DisabilityEvaluation:Introduction,What,WhyandHowtoevaluate,Quantitativeversus Qualitativedata, Usesof evaluation findings.	CO2 CO4
	Unit 4	**RoleofGovernmentinCBR**	
	A	RoleofGovernmentinCBR:Laws,Policies,Programmes,HumanRightsPolicy,Present rehabilitation services, Legal aspectsof rehabilitation. RoleofSocialworkinCBR:Definitionofsocialwork,Methodsofsocialwork,Historyof social work, Role of socialworker in rehabilitation. RoleofvoluntaryOrganizationsinCBR:CharitableOrganizations,Voluntaryhealthagencies– National level and International NGO's, Multilateral and Bilateral agencies.	CO3 CO4
	B	National DistrictLevel Rehabilitation Programme: Primary rehabilitation unit, Regional trainingcenter,District rehabilitationcenter,PrimaryHealth center,Villagerehabilitation worker, Anganwadi worker	CO3 CO4
	C	InternationalHealthOrganizations:WHO,UNICEF,UNDP, UNFPA,FAO,ILO,Worldbank,USAID, SIDA, DANIDA, Rockfeller, Ford foundation, CARE, RED CROSS	CO3 CO4
	Unit 5	Role of Physiotherapy in CBR and Role of Physiotherapy in CBR	

	A	1. RoleofPhysiotherapyinCBR:Screeningfordisabilities,Prescribingexercise programme, Prescribinganddevising lowcostlocallyavailableassisstiveaids,Modificationsphysicaland architecturalbarriers for disabled,Disabilityprevention,StrategiestoimproveADL, Rehabilitation programmesforvariousneuro-musculoskeletal andcardiothoracicdisabilities. 2. Screeningandrehabilitationofpaediatricdisordersinthecommunity:Earlydetectionofhigh riskbabies,Maternalnutritionand education, Rehabilitationof CerebralPalsy,Polio,Downs Syndrome,Muscular Dystrophies etc.,Prevention andrehabilitationof mentalretardation and Behaviouraldisorders,Immunizationprogrammes,Earlyinterventionin highriskbabies, Genetic counselling.	CO4 CO5
	B	3. Extension services and mobileunits: Introduction,Need, Camp approach. 4. Vocationaltraininginrehabilitation:Introduction,Need,Vocationalevaluation,Vocational rehabilitation services. 5. Geriatrics-PhysiologyofAging/degenerativechanges-Musculoskeletal/Neuromotor/cardio –respiratory-/Metabolic, Endocrine, Cognitive,Immunesystems. Roleof Physio Therapyin Hospitalbasedcare,Half-wayhomes,Residential homes,Mealson wheelsetc.Homefor the aged,Institutionbased Geriatric Rehabilitation.Fewconditions:-Alzheimer'sdisease, Dementia, Parkinson's Disease, Incontinence, Iatrogenic drug reactions, etc. Ethics of Geriatric Rehabilitation.	CO4 CO5
	C	RoleofPhysiotherapyinCBR -OccupationalHazardsintheindustrialarea--Accidentsdue to a. Physical agents-e.g.-Heat/cold, light, noise,Vibration, U.V. radiation, Ionizingradiation, b. Chemical agents-Inhalation, local action,ingestion, c. Mechanicalhazards-overuse/fatigueinjuriesduetoergonomicalteration&ergonomic evaluation ofwork place-mechanical stresses per hierarchy– 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 –Role management. d. Psychologicalhazards-e.g.-executives,monotonicity&dissatisfactioninjob,anxietyof workcompletionwithquality,RoleofP.T.inIndustrialsetup&Stress management- relaxation modes. e. Biological Hazards	CO4 CO5

	Mode of examination	Theory/Jury/Practical/Viva		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	-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

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: 2018-22**
Program: Bachelor's of	**Current Academic Year: 2021-22**

physiotherapy			
Branch: Physiotherapy		**Semester: VIII**	
1	Course Code	BPT445	
2	Course Title	COMMUNITY PHYSIOTHERAPY(PRACTICAL)	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	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 duetovarious 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 -Demonstration -Community visit	CO2,C03
	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 : 2018-22**
Program:		**Current Academic Year: 2021-22**
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 ofEvidence based Physiotherapy: Awareness, Consultation, Judgement, and Creativity	CO1, CO2
	C	DevelopmentofEvidencebasedknowledge,TheIndividualProfessionalwith in adiscipline, and Professionalsacrossdisciplines	CO1, CO2
	Unit 2	**Evidence based practitioners**	
	A	EvidenceBasedPractitioner:TheReflectivePractitioner,TheEModel,UsingtheEModel	CO1, CO3
	B	FindingtheEvidence:MeasuringoutcomesinEvidenceBasedPractice,MeasuringHealth Outcomes,Measuringclinicaloutcomes,Inferentialstatisticsand Causation	CO1, CO3
	C	SearchingfortheEvidence:AskingQuestions,Identifyingdifferentsourcesofevidence, ElectronicBibliographic databasesandWorld WideWeb,Conductingaliteratureresearch.Step by- step	CO1, CO3

		searchforevidence			
	Unit 3	**Assessing the evidence**			
	A	AssessingtheEvidence:Evaluatingtheevidence;Levelsofevidenceinresearchusing quantitative methods, Levels of evidence classification system, Outcome Measurement,			CO2,CO3
	B	Biostatistics,The critical reviewof research using qualitative methods.			CO2,CO3
	C	Systematically reviewingthe evidence: Stages of systematic reviews, Meta-analysis, The Cochrane collaboration			CO2,CO3
	Unit 4	**Economic evaluation of evidence**			
	A	Economicevaluationoftheevidence:Typesofeconomicevaluation,conducting economic evaluation, criticallyreviewingeconomicevaluation, locatingeconomicevaluation in the literature			CO1,CO3
	B	Usingtheevidence:Buildingevidenceinpractice;CriticallyAppraisedTopics(CATs),CAT format, Using CATs, DrawbacksofCATs			CO1,CO3
	C	Practiceguidelines,algorithms,andclinicalpathways:Recenttrendsinhealthcare,Clinical PracticeGuidelines(CPG),Algorithms,Clinicalpathways,Legalimplications inclinical pathways andCPG, Comparison ofCPGs, Algorithmsand Clinical Pathways			CO1,CO3
	Unit 5	**Communicating evidence to clients, managers and funders**			
	A	Communicating evidenceto clients, managers and funders: Effectively communicating evidence, Evidencebased communication in the face of uncertainty; Evidence based communication opportunitiesin everyday practice			CO3,CO4
	B	Researchdisseminationandtransferofknowledge:Modelsofresearchtransfer,Concrete research transfer strategies			CO3,CO4
	C	Evidencebased 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 : 2018-22**
Program:		**Current Academic Year: 2021-22**
Branch:		**Semester:VIII**
1	Course Code	BPT446
2	Course Title	CLINICALREASONING AND EVIDENCE BASED PHYSIOTHERAPYPRACTICE
3	Credits	1
4	Contact Hours (L-T-P)	0-0-2
	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 ofEvidence based Physiotherapy: Awareness, Consultation, Judgement, and Creativity	
		DevelopmentofEvidencebasedknowledge,TheIndividualProfessionalwith in adiscipline, and Professionalsacrossdisciplines	
	Unit 2	**Evidence based practitioners**	
		EvidenceBasedPractitioner:TheReflectivePractitioner,TheEModel,UsingtheEModel	CO1, CO3
		FindingtheEvidence:MeasuringoutcomesinEvidenceBasedPractice,MeasuringHealth Outcomes,Measuringclinicaloutcomes,Inferentialstatisticsand Causation	
		SearchingfortheEvidence:AskingQuestions,Identifyingdifferentsources, ElectronicBibliographic databasesandWorld WideWeb,ConductingaliteraturesearchStep by- step searchforevidence	
	Unit 3	**Assessing the evidence**	
		AssessingtheEvidence:Evaluatingtheevidence;Levelsofevidenceinresearchusing quantitative methods, Levels of evidence classification system, Outcome Measurement,	CO2,CO3
		Biostatistics,The critical reviewof research using qualitative methods.	
		Systematically reviewingthe evidence: Stages of systematic reviews, Meta-analysis, The Cochrane collaboration	
	Unit 4	**Economic evaluation of evidence**	
		Economicevaluationoftheevidence:Typesofeconomicevaluation,conducting economic evaluation, criticallyreviewingeconomicevaluation, locatingeconomicevaluation in the literature	CO1,CO3
		Usingtheevidence:Buildingevidenceinpractice;CriticallyAppraisedTopics(CATs),CAT format, Using CATs, DrawbacksofCATs	
		Practiceguidelines,algorithms,andclinicalpathways:Recenttrendsinhealthc	

		are,Clinical PracticeGuidelines(CPG),Algorithms,Clinicalpathways,Legalimplications inclinical pathways andCPG, Comparison ofCPGs, Algorithmsand Clinical Pathways			
	Unit 5	**Communicating evidence to clients, managers and funders**			
		Communicating evidenceto clients, managers and funders: Effectively communicating evidence, Evidencebased communication in the face of uncertainty; Evidence based communication opportunitiesin everyday practice			CO3,CO4
		Researchdisseminationandtransferofknowledge:Modelsofresearchtransfer,Concrete research transfer strategies			
		Evidencebased 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 : 2018-22**
Program: Bachelor's of physiotherapy		**Current Academic Year: 2021-22**
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 teachniques 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 Mappin

			g
	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 includingbudget and incomegeneration	CO2,CO3
	Unit 3	**Recruitment**	
	A	Hospital administration: Organization, Staffing, Information, Communication, Coordination, Cost of services, Monitoring and evaluation.	CO3,CO4
	B	Organizationofphysiotherapydepartment:Planning,Space,Manpower,Otherbasic resources. Organizing meetings, committees, and negotiations	CO3,CO4
	C	Personnelmanagement:Personnelperformanceappraisalsystem,Quality caredelivery from the staff.	CO3,CO4
	Unit 4	**Aims of physiotherapy education**	
	A	Ethics of physiotherapy, A.Conceptsof teachingandlearning	CO4,CO5
	B	e. Guidance andcounseling f. Faculty development program g. Administration in clinicalsetting	CO4,CO5
	C	h. Use of A-V aidsin 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 : 2018-22**
Program: Bachelor's of physiotherapy		**Current Academic Year: 2021-22**
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 teachniques 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.	CO1, CO2
		How to be an effective administrator.	
		Planninghospitaladministrationas part ofabalancedhealthcareprogram.	
	Unit 2	**Introduction to management**	
		Principlesof hospital administration and itsapplicationsto physiotherapy.	CO2,CO3
		Planningandorganization:Planningcycle,Principlesoforganizationalcharts,Resource and quality management,planningchange-innovation	
		Financial issues includingbudget and incomegeneration	
	Unit 3	**Recruitment**	
		Hospital administration: Organization, Staffing, Information, Communication, Coordination, Cost of services, Monitoring and evaluation.	CO3,CO4
		Organizationofphysiotherapydepartment:Planning,Space,Manpower,O	

		therbasic resources. Organizing meetings, committees, and negotiations			
		Personnelmanagement:Personnelperformanceappraisalsystem,Quality caredelivery from the staff.			
	Unit 4	**Aims of physiotherapy education**			
		Ethics of physiotherapy, A.Conceptsof teachingandlearning			CO4,CO5
		e. Guidance andcounseling f. Faculty development program g. Administration in clinicalsetting			
		h. Use of A-V aidsin 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 : 2018-22**
Program: Bachelor's Of Physiotherapy(BPT)		**Current Academic Year: 2021-22**
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	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 choosen topics.
6	Course Outcomes	CO1:To be able to apply the gained knowledge in clinical setup. 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. CO3:To be able to utilize the gained knowledge practically and in hospital setup. CO4:Present and be able to utilize their rationale, approach or

		methodology, outcomes and conclusions. CO5:To be able to enhance practical knowledge,professional approach,academic rigour,independence and self direction.	
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 choosen topics.	
8	Outline syllabus		CO Mapping
	Unit 1	Musculoskelatal physiotherapy	
		Brief. Demonstration. Experimentation. Able to utilize modalities	CO1,CO2
	Unit 2	Cardio pulmonary physiotherapy	
		Brief Demonstration Experimentation	CO2,C03
	Unit 3	Sport's Rehabilitation	
		Brief Demonstration Assesment and treatment	CO3,C04
	Unit 4	Neuromuscular and pediatric 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	ETE	
	100%	0%	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 healh sciences		**Batch : 2018-22**	
Program: Bachelor's of physiotherapy		**Current Academic Year: 2021-22**	
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	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	CO1:Explore and apply relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topic. 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. 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. CO4:Present and be able to defend their rationale,	

		approach or methodology,outcomes and conclusions.			
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**			
		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**			
		1. A statement of the proposed research/project. 2. Aim 3. Statement hypothesis			CO2,CO3
	Unit 3	**Ehical considerations**			
		1. Brief 2. Approval forms 3. Appropriate evidence			CO3,CO4
	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