Programme Structure
Sharda School of Allied Health Sciences

Bachelor of Physiotherapy (BPT)

Programme Code – SAH0103

Batch: 2023-2027

Programme Structure
Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: I

S. No.	Paper ID	Course Code	Course	Teaching Load			Credits	Type of Course[3]: (CC, AECC, SEC, DSE)	
				L	T	P			
THEORY SUBJECTS									
1.	35859	PTB107	Human Anatomy- Surface and Systemic	4	1	0	5	Core-CC	
2.	36343	HPY101	Human Physiology – I	4	0	0	4	Core-CC	
3.	35861	PTB103	Biochemistry	2	0	0	2	Core-CC	
4.	35862	PTB104	Psychology & Sociology	3	0	0	3	Co-REQUSITE-DSC	
6.	35864	PTB106	First aid, & CPR	1	0	0	1	Pre-requisite- DSC	
Practical/Viva-Voce/Jury									
1.	36357	PTB135	Human Anatomy- Surface and Systemic (LAB)	0	0	4	2	Core	DSE
2.	35866	PTB132	Human Physiology –I (LAB)	0	0	4	2	Core	SEC
3.	35867	PTB133	Biochemistry (LAB)	0	0	2	1	Core	CC
4.	35868	PTB134	First Aid & CPR (LAB)	0	0	2	1	Pre-requisite	DSC
5.	16254	ARP101	Communicative English-I	1	0	2	2	Pre-requisite-SEC	
TOTAL CREDITS							**23**		

Programme Structure
Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: II

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Type of Course[4]: (CC, AECC, SEC, DSE)
				L	T	P		
THEORY SUBJECTS								
1.		PTB116	Human Anatomy- Regional	4	1	0	5	Core- CC
2.		HPY201	Human Physiology -II	4	0	0	4	Core-CC
3.	36120	PTB113	Principles of Biophysical Agents	2	0	0	2	Core-CC
4.	36121	PTB114	Fundamentals of Exercise Science	2	0	0	2	Co-requisite-CC
5.	36122	PTB115	Nutrition	1	0	0	1	Co-requisite-AECC
6			OPE				2	Open Elective
Practical/Viva-Voce/Jury								
1.		PTB146	Human Anatomy-(Regional)	0	0	4	2	Core-CC
2.		PTB142	Human Physiology -II	0	0	4	2	Core-CC
3.	36125	PTB143	Principles of Biophysical Agents	0	0	2	1	Core-CC
4.	36126	PTB144	Fundamentals of Exercise Science	0	0	2	1	Co-requisite-DSE
5.	36127	PTB145	Yoga Science	0	0	2	1	Co-requisite-AECC
6		ARP102	Communicative English-II	1	0	2	2	SEC
TOTAL CREDITS							**25**	

Programme Structure
Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: III

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Core/Elective Pre- Requisite/ Co Requisite Type of Course[5]: (CC, AECC, SEC, DSE)	
				L	T	P			
THEORY SUBJECTS									
1.		PTB201	Pathology	2	0	0	2	Core-CC	
2.		PTB202	Pharmacology	2	0	0	2	Core-DSC	
3.		PTB203	Electrotherapy	2	0	0	2	Core-CC	
4.		PTB204	Fundamentals of Biomechanics and Exercise Therapy	3	0	0	3	Core-CC	
5		PTB205	Anthropometry	1	0	0	1	Core-DSC	
6		PTB206	Biostatistics & Research Methodology	2	1	0	3	Co-requisite-DSC	
7			VAC				-	VAC	
Practical/Viva-Voce/Jury									
1.		PTB231	Pathology	0	0	2	1	Core	CC
2.		PTB232	Pharmacology	0	0	2	1	Core	CC
3.		PTB233	Electrotherapy	0	0	2	1	Core	CC
4.		PTB234	Fundamentals of Biomechanics and Exercise Therapy	0	0	2	1	Core	CC
5.		PTB235	Anthropometry	0	0	2	1	Core	CC
6.		PTB236	Clinical observation – I	0	0	6	3	Core	CC
TOTAL CREDITS							**21**		

Programme Structure
Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: IV

S. No.	Paper ID	Subject Code	Subject	Teaching Load			Credits	Core/Elective Pre- Requisite/ Co Requisite Type of Course[5]: (CC, AECC, SEC, DSE)
				L	T	P		
THEORY SUBJECTS								
1.		PTB211	Exercise Therapy	3	0	-	3	Core-CC
2.		PTB212	Thermotherapy & Actinotherapy	2	0	0	2	Core-DSC
3.		PTB213	Medical Law, and Ethics	2	0	0	2	Core-CC
4.		PTB214	Ergonomics	1	0	0	1	Co-requisite-DSC
5.		PTB215	Microbiology	2	0	0	2	Co-requisite-CC
6.		PTB216	Quality Assurance in Clinics	2	0	0	2	Co-requisite-DSC
7.			Open Elective	2	-	-	2	Elective-OPE
Practical/Viva-Voce/Jury								
1.		PTB241	Exercise Therapy	-	-	2	1	Core-CC
2.		PTB242	Thermotherapy & Actinotherapy	-	-	2	1	Core-CC
3.		PTB243	Ergonomics	0	0	2	1	Core-CC
4.		PTB244	Microbiology	0	0	2	1	Co-requisite-DSC
5.		PTB245	Clinical Observation -II	-	-	6	3	Co-requisite-CC
6.		CCU108	Community Connect	0	0	4	2	DSC
TOTAL CREDITS							**23**	

Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: V

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Type of Course[7]: (CC, AECC, SEC, DSE
				L	T	P		
THEORY SUBJECTS								
1.		PTB301	General Medicine including Endocrinology, Paediatrics & Geriatrics	2	0	0	2	Core-CC
2.		PTB302	General Surgery including ENT, burns & plastic surgery	2	0	0	2	Core-CC
3.		PTB303	Orthopaedics, and Traumatology	3	0	0	3	Core-CC
4.		PTB304	Clinical Neurology & Psychiatry	2	0	0	3	Core-CC
5.		PTB305	Applied Biomechanics & Kinesiology	3	0	0	3	Core-CC
6.		INC001	Faculty Student Industry Connect	0	0	0	2	Pre-requisite-FSIC
7.		RBL001	Research Based Learning-I	0	0	0	0	Pre-requisite-RBL
8.			VAC					VAC (Audit Course)
Practical/Viva-Voce/Jury								
1.		PTB331	General Medicine including Endocrinology, Paediatrics & Geriatrics	0	0	2	1	Core-CC
2		PTB332	General Surgery including ENT, burns & plastic surgery	0	0	2	1	Core-CC
3		PTB333	Orthopaedics, and Traumatology	0	0	2	1	Core-CC
4		PTB334	Clinical Neurology & Psychiatry	0	0	2	1	Core-CC
5		PTB335	Applied Biomechanics & Kinesiology	0	0	2	1	Core-CC
6.		PTB336	Clinical Education-Evaluation methods	0	0	6	3	Core-CC
7.		PTB337	Clinical Education-Outcome measures	0	0	6	3	Core-CC
TOTAL CREDITS							**26**	

Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: VI

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Type of Course[8]: (CC, AECC, SEC, DSE
				L	T	P		
THEORY SUBJECTS								
1.		PTB311	Obstetrics & Gynaecology	2	0	0	2	Core-CC
2.		PTB312	Cardiovascular Science Including Lymphatic system	2	0	0	2	Core-DSC
3.		PTB313	Respiratory System	1	0	0	1	Core-CC
4.		PTB314	Environmental health, and health Promotion	1	0	0	1	Core- SEC
5.		PTB315	Community Medicine	2	0	0	2	Core-CC
6.		PTB316	Interpretation of Diagnostic imaging technology	2	0	0	2	Core-CC
7.			Open elective	2	0	0	2	Elective-OPE
Practical/Viva-Voce/Jury								
1.		PTB341	Obstetrics & Gynaecology	0	0	2	1	Core-CC
2		PTB342	Cardiovascular Science Including Lymphatic system	0	0	2	1	Core-CC
3		PTB343	Respiratory System	0	0	2	1	Core-CC
4		PTB344	Environmental health, and health Promotion	0	0	2	1	Co-requisite -DSC
5.		PTB345	Clinical Education- Systems interaction	0	0	6	3	Core-CC
6.		PTB346	Clinical Education - Differential diagnosis	0	0	6	3	Core-CC
		RBL002	Research Based Learning- II	0	0	0	0	RBL
TOTAL CREDITS							**22**	

Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: VII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load L	T	P	Credits	Type of Course[9]: (CC, AECC, SEC, DSE
THEORY SUBJECTS								
1.		PTB401	Physiotherapy in Orthopedics & sports medicine	3	0	0	3	Core-CC
2.		PTB402	Physiotherapy in Neurology and Neurosurgery	3	0	0	3	Core-CC
3.		PTB403	Physiotherapy in General Medicine and General Surgery	1	0	0	1	Core-CC
4.		RBL003	Research Based Learning-III	0	0	0	2	Co-requisite-RBL
5.		PTB404	Complementary Medicine	1	0	0	1	Co-requisite-DSC
6.		PTB405	Occupational Health	1	0	0	1	Co-requisite-SEC
			VAC					VAC
Practical/Viva-Voce/Jury								
1.		PTB431	Physiotherapy in Orthopaedics and Sports Medicine	0	0	2	1	Core-CC
2		PTB432	Physiotherapy in Neurology and Neurosurgery	0	0	2	1	Core-CC
3		PTB433	Physiotherapy in General Medicine and General Surgery	0	0	2	1	Core-CC
4		PTB434	Occupational Health	0	0	2	1	Core-CC
5		PTB435	Complementary Medicine	0	0	2	1	Core-CC
6		PTB436	PT Clinical Reasoning-I	0	0	4	2	Clinical Training-CT
7		PTB437	PT Clinical Skills-I	0	0	4	2	Clinical Training-CT
8		PTB438	PT Clinical Documentation-I	0	0	4	2	Clinical Training-CT
TOTAL CREDITS							**22**	

Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: VIII

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Type of Course[10]: (CC, AECC, SEC, DSE
				L	T	P		
THEORY SUBJECTS								
1.		PTB411	Physiotherapy in Cardiopulmonary Sciences (lymphatic system)	3	0	0	3	Core-CC
2.		PTB412	Physiotherapy in Obstetrics, and Gynaecology	2	0	0	2	Core-DSC
3.		PTB413	Community Based Rehabilitation	2	0	0	2	Core-CC
4.		PTB414	Advanced Rehabilitation Aids and Appliances	1	0	0	1	Core- DSC
5.		PTB415	Teamwork and interpersonal communication	1	0	0	1	Co-requisite-AECC
6.		PTB416,	ICU PT; *	2	0	0	2	Co-requisite-SEC
6		PTB417	PT in Paediatrics; *	2	0	0	2	Co-requisite-SEC
6.		PTB418	Geriatric PT; *	2	0	0	2	Co-requisite-SEC
6.		PTB419	Hand Rehab*	2	0	0	2	Co-requisite-SEC

- **Any one course shall be opted……**

Practical/Viva-Voce/Jury								
1.		PTB441	Physiotherapy in Cardiopulmonary Sciences (lymphatic system)	0	0	2	1	Core-DSC
2		PTB442	Physiotherapy in Obstetric, and Gynaecology	0	0	2	1	Core-CC
3		PTB443	Community Based Rehabilitation	0	0	2	1	Core-CC
4		RBL004	Project	0	0	4	2	RBL-RBL
5		PTB445	Teamwork and interpersonal communication	0	0	2	1	Co-REQUISITE-AECC
6		PTB446	ICU PT;	0	0	2	1	SEC-SEC
6.		PTB444	PT in Paediatrics;	0	0	2	1	SEC-SEC
6.		PTB450	Geriatric PT;	0	0	2	1	SEC-SEC
6.		PTB451	Hand Rehab	0	0	2	1	SEC-SEC
7		PTB447	PT Clinical Reasoning-II	0	0	4	2	Core-CC
8		PTB448	PT Clinical Skills-II	0	0	4	2	Core-CC
9		PTB449	PT Clinical Documentation-II	0	0	4	2	Core-CC
TOTALCREDITS							**24**	

Sharda School of Allied Health Sciences
Programme: BPT
Batch: 2023-2027
Semester: IX

S. No.	Paper ID	Subject Code	Subjects	Teaching Load			Credits	Type of Course[10]: (CC, AECC, SEC, DSE	
1.		**PTB501**	Internship	0	0	0	20	Core	C C

Course Modules

First Semester

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 1st**
1	Course Code	**PTB 107**
2	Course Title	**HUMAN ANATOMY –SURFACE AND SYSTEMIC**
3	Credits	**5**
4	Contact Hours (L-T-P)	**4-1-0**
	Course Type	CC
5	Course Objective	1. The student will be able to demonstrate knowledge in humananatomy 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) thefollowing objectives of the course.
6	Course Outcomes	After completion of the course the student shall be able to- CO1: To identify the gross & microscopic structures of various tissues and organs in the human body. CO2: To correlate the human anatomical structure with the functions. CO3: To remember & demonstrate the bones, joints, muscles, vascular, and nerve supply of upper limb. CO4: To demonstrate boundaries and contents of body cavity. CO5: To apply the structural knowledge of bones, joints, muscles, vascular and nerve supply. CO6 –To evaluate anatomical deviations and deformity.
7	Course Description	It is designed to provide students with the working knowledge of the structure of the human body which is essential foundation for their clinical studies
8	Outline syllabus	CO Mapping
	Unit 1	General anatomy	
	A	Introduction, Skeleton, Joints, Muscles	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	

f

	A	Muscles of arm, forearm, hand – origin, insertion, nerve supply and actions.			CO1, CO3
	B	Back , scapular region, pectoral region, Breast			CO1, CO3
	C	Arches of hand, skin of the palm and dorsum of hand.Axilla, cubital fossa, Brachial plexus, 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, CO6
	B	Radio-ulnar joint, wrist joint and joints of the hand.			CO1, CO3, CO6
	C	Applied anatomy of all joints of upper limb.			CO1, CO3, CO6
	Unit 4	Thorax			
	A	Thoracic cage, thoracic cavity, Intercostal muscles and Accessory muscles of respiration: Origin,insertion, nerve supply and action Diaphragm: Origin, insertion, nerve supply and action, openings inthe diaphragm			CO2, CO4
	B	Pleura , lungs and respiratory tree			CO2, CO4
	C	Percardium.Heart and great blood vessels			CO2, CO4
	Unit 5	Head and Neck			
	A	Soft parts: Scalp, Muscles of the face and neck and their nerve andblood supply, triangles of the neck., Gross anatomy of eyeball, nose, ears and tongue Thyroid gland, salivary gland.			CO1 CO5, CO6
	B	Course , distributions and applied of cranial nerves (IV.V, VI,VII,VIII,IX, XII)			CO1, CO5, CO6
	C	Temporo-mandibular joint with muscles of mastication.			CO1, CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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 OrientedAnatomy. 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	PSO1	PSO2	PSO3
CO1	2	3	2	3	1	2	3	3	2	3	1	1	-	-
CO2	3	2	3	2	3	1	3	2	3	1	3	2	2	-
CO.3	3	3	1	2	1	3	1	3	1	2	3	2	-	3
CO4	1	2	3	3	3	2	2	2	3	3	-	3	1	-
CO5	2	3	3	1	3	2	3	3	3	3	2	3	3	1
CO6	2	2	1	3	3	1	3	2	1	3	3	1	3	2
Average POs	**2.166**	**2.5**	**2.16**	**2.33**	**2.33**	**1.83**	**2.5**	**2.5**	**2.16**	**2.5**	**2.3**	**2.33**	**1.5**	**1.0**

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

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 1st**
1	Course Code	**HPY101**
2	Course Title	**HUMAN PHYSIOLOGY – I**
3	Credits	**4**
4	Contact Hours (L-T-P)	**4-0-0**
	Course Type	CC
5	Course Objective	● To learn and understand the fundamental scientific concepts relating to a broad range of topics in human physiology. ● To make the students familiar with the basic factual information concerning the mechanisms and functioning of the human body system. ● To develop investigative skills and to become familiar with standard techniques of measurement. ● To help the students to gain practice and confidence in applying this knowledge, in a quantitative manner where appropriate, to actual experiments
6	Course Outcomes	After completion of the course the student shall be able to- CO1: To define the importance of general physiology of the human body CO2: To explain the importance of nerve muscle physiology CO3: To define the importance, function of Blood along with clinical importance CO4:To explain in detail about the information about Cardiovascular system CO5: To describe the respiratory system and its function CO6:To explain about Digestive system of the body
7	Course Description	● General & nerve muscle physiology ● Blood ● Cardiovascular system ● The respiratory system ● Digestive system
8	Outline syllabus	CO Mapping
	Unit 1	**Cell Structure, Nerve Tissue, Muscles**
	A	Cell and cell organelle Structure & function, transport across cell membrane, homeostasis, membrane potential. — CO1, CO2
	B	Structure & functions of nerve tissues, physiological properties of nerve fibers, nerve fiber types & functions. — CO1, CO2
	C	Neuromuscular junction, Difference between skeletal muscle, smooth muscle & cardiac muscle. — CO1, CO2
	Unit 2	**BLOOD**

	A	Composition & functions of blood, plasma proteins & hemoglobin.			CO1, CO3
	B	Erythrocytes, jaundice, leucocytes & platelets.			CO1, CO3
	C	Blood coagulation, blood groups & immunity			CO1, CO3
	Unit 3	**Cardiovascular System**			
	A	Cardiac Muscle, physiological anatomy of the heart & blood vessels, cardiac cycle.			CO1, CO3
	B	Conducting system of heart, Heart sounds & ECG.			CO1, CO3
	C	Heart Rate, Cardiac Output, Blood Pressure & Pulse.			CO1, CO3
	Unit 4	**Respiratory System**			
	A	Physiological anatomy & functions of respiratory system, airways, dead space, graph of lung volume & capacities.			CO1, CO4, CO6
	B	Transport of Gases. Physiology of Exercise & High Altitude.			CO1, CO4, CO6
	C	Regulation of respiration & Hypoxia.			CO1,CO4
	Unit 5	**Gastrointestinal System**			
	A	Physiological anatomy of GIT, Saliva, Mouth & Oesophagus.			CO1, C05,
	B	Stomach, Pancreas, Liver & Gall Bladder.			CO1,C05, CO6
	C	Small Intestine, Large Intestine, Digestion and Absorption in GIT.			CO1,C05, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Sembulingum, K., Essentials of MedicalPhysiology 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. 4. Review of Medical Physiology William FooGanong			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average POs	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 1st**
1	Course Code	**PTB 103**
2	Course Title	**BIOCHEMISTRY**
3	Credits	**2**
4	Contact Hours (L-T-P)	**2-0-0**
	Course Type	CC
5	Course Objective	• To make the students able to do routine laboratory testing under stipulated conditions. • To prepare specimens and operate machines that automatically analyse samples. • To provide the conceptual basis for understanding biochemical and particularly address the fundamental mechanisms of the biomolecules to facilitate the life. • To develop diagnostic skills in clinical biochemistry • To provide an advanced understanding of the core principles and topics of Biochemistry and their experimental basis.
6	Course Outcomes	CO1: Students are able to know the importance of carbohydrates CO2: Student are able to develop the understanding about the importance of lipids CO3: Students are able to build the ability to understand the importance of different types of amino acids and proteins CO4: Student are able to develop the importance of minerals, vitamins and nutrition. CO5: Student are able to develop the understanding about the importance of enzymes and nucleic acids CO6:: Students are able to build the ability to understand the function of hormones and role of clinical biochemistry.
7	Course Description	● Carbohydrate Chemistry ● Lipid Chemistry ● Amino acid and protein chemistry ● Vitamins, minerals and hormones ● Enzymes, nucleic acids, clinical biochemistry and hormones.
8	Outline syllabus	CO Mapping
	Unit 1	**Carbohydrate Chemistry**
	A	Definition, general classification with examples. CO1
	B	Glycosidic bond, Structures, composition, sources, properties and CO1

		functions of Monosaccharide's and Disaccharides.	
	C	Structures, composition, sources, properties and functions of Oligosaccharides and Polysaccharides.	CO1
	Unit 2	**Lipid Chemistry**	
	A	Definition, classification, properties and functions of Fatty acids.	CO2, CO6
	B	Triacylglycerol and Phospholipids	CO2, CO6
	C	Cholesterol, Essential fatty acids and their importance, Lipoprotein.	CO2, CO6
	Unit 3	**Amino-acid Chemistry**	
	A	Amino acid chemistry: Definition, Classification, Peptide bonds. Peptides: Definition, Biologically important peptides	CO3
	B	Protein chemistry: Definition, Classification, Functions of proteins, Collagen and Elastin	CO3, CO6
	C	Primary, Secondary, tertiary and quartenary structure of proteins.	CO3
	Unit 4	**Minerals, Vitamins and Nutrition**	
	A	Definition, Sources, RDA, absorption, transport and functions along with clinical significance of various minerals (Sodium, Potassium, Calcium, Phosphate, Sulphur, Iron, Magnesium, Fluoride, Chloride, Zinc and Copper).	CO4, CO6
	B	Definition, classification according to solubility, Sources, Coenzyme forms, functions and deficiency manifestations of different vitamins	CO4
	C	Importance of nutrition: Calorific values, Respiratory quotient, Energy requirement of a person - Basal metabolic rate, Balanced diet, recommended dietary allowances, Role of carbohydrates, lipid and protein in diet.	CO4, CO6
	Unit 5	**Enzymes, Nucleic acids, Clinical biochemistry and Hormones**	
	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)	CO5
	B	Nucleotide and Nucleic acid Chemistry-Nucleotidecomposition, 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.	CO5, CO6
	C	Clinical Biochemistry & Hormone- LFT, KFT, Cardiac marker, Lipid profile, TFT, Glycemic profile. Insulin, Glucagon and Thyroid hormone.	CO5

	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Biochemstry by U. Satyanarayana IIEdition. 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 ReviewsBiochemistry. 5. Harper's Illustrated Biochemstry by Murry et.a1.26 Edition			
	Other References	1. Albert Lehininger, Principles ofbiochemistry 1993 2. James M Orten, Human biochemistry 3. Lubert Strayer, Biochemistry 4. Thomas M Devlin, Bio chemistry withclinical correalation			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	3	3	2	3	3	1	2	3	3	3	2
CO2	2	3	1	2	1	3	2	1	3	3	3	3	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	2	3	3	3	3	2	2	3	3	3	1	2
CO5	1	3	3	1	2	3	2	3	3	2	2	3	2	2
CO6	3	2	2	3	1	2	1	2	2	2	2	2	3	3
Average Pos	**2.5**	**2.33**	**2.33**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 1st**	
1	Course Code	**PTB 104**	
2	Course Title	**Psychology & Sociology**	
3	Credits	**3**	
4	Contact Hours (L-T-P)	**3-0-0**	
	Course Type	DSC	
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 behaviourin 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 behaviourfor 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	After completion of the course the student shall be able to- CO1: Understand the role of family and community in the development of behaviour. 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 behaviour. CO4: Psychosocial assessment of patients in various developmental stages. CO5: Concept of stress and its relationship to health, sickness and one's profession. CO6: To Formulate the applicability of psychology and sociology in Physiotherapy	
7	Course Description	This course is designed 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	**Introduction to Sociology**	

	A	Introduction: a. Meaning-Definition and scope of sociology b. Methods of Sociological investigations- Case study, social survey, questionnaire, Interview and opinion poll methods. c. Importance of its study with special reference to Health Care Professionals.	CO1, CO2
	B	Socialization: a. Meaning and nature of socialization. b. Primary, Secondary and Anticipatory 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
	C	Family: a. The family, meaning and definitions. b. Influence of family on the individual's health, family and nutrition, the effects of sickness in the family and psychosomatic disease and their importance to physiotherapy. Community: a. Rural community: Meaning and features–Healthhazards of ruralities, health hazards to tribal community.	CO1, CO2
		b. Urban community: Meaning and features- Health hazards of urbanities.	
	Unit 2	**Culture and Health:**	
	A	Culture and Health: a. Concept of Health b. Culture and Health Disorders Social change: a. Meaning of social changes. b. Factors of social changes. c. Social change and stress. d. The role of social planning in the improvement of health and rehabilitation.	CO1, CO3
	B	Social Problems of disabled Population explosion a. Poverty and unemployment b. Juvenile delinquency c. Problems of women in employment d. Geriatric problems	CO1, CO3
	C	Social security and social legislation in relation to the disabled. Social worker: The role of a Medical Social Worker.	CO1, CO3
	Unit 3	**Introduction to Psychology**	

	A	Introduction to Psychology: Schools, Methods and Branches Psychology and physiotherapy Growth and Development a. Lifespan: Different stages of development (Infancy, childhood, adolescence, adulthood, middle age, old age). b. Heredity and environment: role of heredity and environment in physical and psychological development.	CO4,CO5
	B	Sensation, attention and perception a. Sensation: Vision, Hearing, Olfactory, Gustatory and Cutaneous sensation, movement, equilibrium and visceral sense. b. Attention: Types of attention, Determinants of attention (subjective determinants and objective determinants).	CO4,CO5
		c. Perception: Gestalt principles of organization of perception (principle of figure ground and principles of grouping), factors influencing perception (past experience and context). d. Illusion and hallucination: different types.	
	C	Motivation a. Motivation cycle (need, drive, incentive, reward). b. Classification of motives.	CO4,CO5
	Unit 4	**Emotions**	
	A	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
	B	Intelligence Distribution of Intelligence Assessment of Intelligence	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.	CO4,CO5
	Unit 5	**Personality**	
	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. Social psychology: Leadership	CO5,CO6

	C	Clinical psychology–Models of training, abnormal behavior assessment, clinical judgment, psychotherapy, self-management methods, physiotherapist patient interaction, Group therapy, Body awareness, Pediatric, child and geriatric clinical psychology.			CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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 sterlingpublications. 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 appliedto medicine- W.B.Sunders.			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	1	3	2	3	3	2	3	3	2
CO2	3	2	3	2	3	3	2	3	3	3	3	3	2	3
CO.3	2	3	3	3	2	2	3	3	2	3	3	2	3	3
CO4	3	3	3	3	2	3	2	3	3	1	3	3	3	3
CO5	3	3	3	3	2	3	2	3	3	3	3	3	3	3
CO6	3	1	1	2	3	1	3	2	3	2	1	1	2	2
Average POs	**2.66**	**2.5**	**2.5**	**2.66**	**2.5**	**2.166**	**2.5**	**2.66**	**2.83**	**2.5**	**2.5**	**2.5**	**2.66**	**2.66**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 1st**	
1	Course Code	**PTB 106**	
2	Course Title	**FIRST AID AND CARDIOPULMONARY RESUSCITATION**	
3	Credits	**1**	
4	Contact Hours(L-T-P)	**1-0-0**	
	Course Type	DSC	
5	Course Objective	**1.** to impart the Knowledge and skills related to first aid, basic and advanced lifesaving protocols. **2.** to teach first aid, safe transport, lifesaving skills (basic and advanced) required to be both a team member and a team leader in either an in-hospital or out- of-hospital setting. **3.** to master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	After completion of the course the student shall be able to- CO1: To recognize and initiate the chain of survival as soon as a possible problem is identified. CO2: To understand the basic principles of first aid & CPR. CO3: To secure the life and perform transportation to hospital. CO4: To use Aids and appliances to Initiate rescue breathing & circulation when they are inadequate. CO5: To perform and lead High-quality CPR for adults, children, and infants. CO6: To formulate the applicability of CPR	
7	Course Description	Lifesaving and injury containment are the core of this course. The class will be taught using mannequins, dummies and other aids and appliances as a face-to-face workshop. Practical skills are the focus. Theory and case-based method for Self-work is also encouraged. In addition to assigning the case studies, the course instructor will spend considerable time in teaching and understanding the concept and skills of C PR through the eyes of the learner. The instructor will cover the ways to think skillfully as per guidelines using AHA, and other agencies statements.	
8	Outline syllabus		CO Mapping
	Unit 1	**First aid**	
	A	Emergency safety panning – triage & transport	CO1, CO2
	B	First aid basics	CO1,CO2

	C	Introduction to Disaster Types and preparedness			CO1,CO2
	Unit 2	**Introduction to Resuscitation**			
	A	Chain of survival			CO1, CO3
	B	Calling for help			CO1, CO3
	C	AHA guidelines and up-dation			CO1, CO3
	Unit 3	**Basic life support**			
	A	CPR & AED			CO1,CO3
	B	Circulation			CO1,CO3
	C	Airway & Breathing – Bag & Mask ventilation			CO1,CO3
	Unit 4	**Advanced Cardiac life Support**			
	A	Types of arrythmias and cardiac arrest, Defibrillation			CO2,CO4
	B	Emergency cart/ crash card			CO2,CO4
	C	Mechanical ventilatory support - basics			CO2,CO4
	Unit 5	**PALS and infants' life support**			
	A	Pediatric advanced life support			CO5,CO6
	B	Infant life support			CO5, CO6
	C	Differences from adult life support			CO5, CO6
	Mode of examination				
	Weightage Distribution	CA	MSE	ESE	
		25%	25%	50%	
	Text book/s*	**1.** International Liaison Committee on Resuscitation. 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. Circulation. 2020;142(suppl 1):In press. **2.** International Liaison Committee on Resuscitation. 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. Resuscitation. 2020:In press.			
	Other References	**1.** St John Ambulance India – Indian Red Cross Society. First Aid (English version) Authorised Manual 6th Edition. 2011. IFRC International First Aid Guidelines 2011. Belgian Red Cross Flanders. European First Aid Materials EFAM. 2011. **2.** Merchant RM, Topjian AA, Panchal AR, et al. Part 1: executive summary: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2020;142(suppl 2):In press.			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	2	3	2	3	3	2	3	3	2
CO2	3	2	3	2	3	3	2	3	3	1	3	3	2	3
CO3	2	3	3	1	2	2	3	3	2	3	3	2	3	3
CO4	3	2	1	3	3	3	2	1	3	2	2	3	3	3
CO5	1	3	3	3	2	3	2	3	1	3	3	3	3	3
CO6	2	3	2	3	1	3	1	2	3	3	2	1	1	2
Average Pos	**2.33**	**2.66**	**2.33**	**2.5**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.67**

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

Practical

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		.
Branch: Physiotherapy		**Semester: 1st**
1	Course Code	**ARP101**
2	Course Title	**Communicative English-1**
3	Credits	**2**
4	Contact Hours (L-T-P)	**1-0-2**
	Course Type	SEC
5	Course Objective	To minimize the linguistic barriers that emerges in varied socio-linguistic environments through the use of English. Help students to understand different accents and standardize their existing English. Guide the students to hone the basic communication skills - listening, speaking, reading and writing while also uplifting their perception of themselves, giving them self-confidence and building positive attitude positive attitude.
6	Course Outcomes	After completion of this course, students will be able to: CO1 Develop a better understanding of advanced grammar rules and write grammatically correct sentences CO2 Acquire wide vocabulary and punctuation rules and learn strategies for error-free communication. CO3 Interpret texts, pictures and improve both reading and writing skills which would help them in their academic as well as professional career CO4 Comprehend language and improve speaking skills in academic and social contexts CO5 Develop, share and maximize new ideas with the concept of brainstorming and the documentation of key critical thoughts articulated towards preparing for a career based on their potentials and availability of opportunities. CO6 Function effectively in multi-disciplinary teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality
7	Course Description	The course is designed to equip students, who are at a very basic level of language comprehension, to communicate and work with ease in varied workplace environment. The course begins with basic grammar structure and pronunciation patterns, leading up to apprehension of oneself through written and verbal expression as a first step towards greater employability
8	Outline syllabus		CO Mapping
	Unit 1	Sentence Structure	
	A	Subject Verb Agreement	CO1,

	B	Parts of speech			CO1
	C	Writing well-formed sentence			
	Unit 2	**Vocabulary Building & Punctuation**			
	A	Homonyms/ homophones, Synonyms/Antonyms			CO1, CO2
	B	Punctuation/ Spellings (Prefixes-suffixes/Unjumbled Words)			
	C	Conjunctions/Compound Sentences			
	Unit 3	**Writing Skills**			
	A	Picture Description – Student Group Activity			CO3,
	B	Positive Thinking - Dead Poets Society-Full-length feature film - Paragraph Writing inculcating the positive attitude of a learner through the movie | SWOT Analysis – Know yourself			CO3, CO2
	C	Story Completion Exercise –Building positive attitude - The Man from Earth (Watching a Full length Feature Film)			CO3, CO2
	Unit 4	**Speaking Skill**			
	A	Self-introduction/Greeting/Meeting people – Self branding			CO4
	B	Describing people and situations - To Sir With Love (Watching a Full length Feature Film)			
	C	Dialogues/conversations (Situation based Role Plays)			CO4
	Unit 5	**Professional Skills | Career Skills**			
	A	Exploring Career Opportunities			CO4, CO5
	B	Brainstorming Techniques & Models			
	C	Social and Cultural Etiquettes			
	D	Internal Communication			
	Unit 6	**Leadership and Management Skills**			CO6
		Managerial Skills			
		Entrepreneurial Skills			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		60%	NA	40%	

	Text book/s*	• Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication • • Comfort, Jeremy (et.al). Speaking Effectively. Cambridge University Press	

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
ARP101.1	-	-	-	-	-	-	-	-	1	3		2	-	-	-
ARP101.2	-	-	-	-	-	-	-	-	1	3		2	-	-	-
ARP101.3	-	-	-	-	-	-	-	-	1	3		2	-	-	-
ARP101.4	-	-	-	-	-	-	-	-	1	2	1	2	-	-	-
ARP101.5	-	-	-	-	-	-	-	-	1	2	1	2	-	-	-
ARP101.6	-	-	-	-	-	-	-	-	1	2	1	2	-	-	-

1-Slight (Low)

2-Moderate(Medium)

3-Substantial(High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: I**	
1	Course Code	**PTB 135**	
2	Course Title	**HUMAN ANATOMY- SURFACE AND SYSTEMIC (Practical)**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Status	DSC	
5	Course Objective	1. The student will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapyand 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	After completion of the course the student shall be able to- CO1: To identify the microscopic structures of various tissues and organs in the human body and correlate the structure with the functions. CO2: To apply 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 discuss 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 discuss the bones, joints, muscles, vascular and nerve supply of head and neck. CO6: To evaluate the anatomical deviations and deformities.	
7	Course Description	It is designed to provide students with the working knowledge of the structure of the human bodywhich is essential foundation for their clinical studies.	
8	Outline syllabus		CO Mapping
	Unit 1	**GENERAL ANATOMY**	
		1. Human skeleton, types of bones and joints 2. Demonstration. 3. Identification	CO1, CO2
	Unit 2	**UPPER EXTREMITY**	
		1. Osteology of bones of upper limb 2. Surface Anatomy 3. Demonstration & Examination	CO1, CO3
	Unit 3	**UPPER EXTREMITY JOINT**	

		1. Shoulder , elbow, radioulnar, wrist and small joints of hand 2. Movements at all joints 3. Demonstration & Examination	CO2, CO4, CO6
	Unit 4	**THORAX**	
		1. Osteology of bones forming thoracic wall 2. Surface Anatomy of lungs and heart 3. Demonstration & Examination	CO1, CO4, CO6
	Unit 5	**HEAD AND NECK**	
		1. Osteology: Mandible and bones of the skull 2. Surface Anatomy 3. 3.Demonstration & Examination	CO4, CO5, CO6
	Mode of examination	Practical/Viva	
	Weightage Distribution	CA: 25% / MTE: 0% / ETE: 75%	
	Text book/s*	1. B D Chaurasia's Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas-InderbirSingh. 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	PSO1	PSO2	PSO3
CO1	2	3	2	3	1	2	3	3	2	3	1	3	3	2
CO2	3	2	3	2	3	1	3	2	3	1	3	2	2	3
CO.3	3	3	1	2	1	3	1	3	1	2	3	2	3	3
CO4	1	2	3	3	3	2	2	2	3	3	3	3	1	3
CO5	2	3	3	1	3	2	3	3	3	3	2	3	3	1
CO6	2	2	1	3	3	1	3	2	1	3	3	1	3	2
Average POs	**2.166**	**2.5**	**2.16**	**2.33**	**2.33**	**1.83**	**2.5**	**2.5**	**2.16**	**2.5**	**2.5**	**2.33**	**2.5**	**2.33**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 1st**	
1	Course Code	**PTB 132**	
2	Course Title	**HUMAN PHYSIOLOGY I (PRACTICAL)**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	SEC	
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will beable to demonstrate an understanding of elementary human physiology	
6	Course Outcomes	After completion of the course the student shall be able to- CO1: Relate the Working and usage of Compound microscope in physiology practicals. CO2: Explain the importance of Physiology experiments with their clinical aspects. CO3: Understand the Importance of Hb estimation, BT, CT, BG, ESR & PCV determination. CO4: Analyze the clinical aspects of TLC, TRBC Count, DLC and their relation with blood indices. CO5: Demonstrate in depth knowledge of Nerve muscle graphs & charts; with their importance in Physiotherapy clinics. CO5: Evaluate the Nerve muscle graphs & charts; with their importance in physiotherapy clinics. CO6: Discuss the SMT and Effect of temperature on skeletal muscle, BT, CT, BG, ESR & PCV determination	
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		
		a. Demonstration of Microscope b. Demonstration of Haemoglobin estimation c. Experimentation	CO1 , CO2 , CO3
	Unit 2		
		a. Total Red Blood Cell Count b. Total Leucocyte Count. c. Experimentation	CO1, CO2, CO3, CO4

	Unit 3		
		a. BT, CT, Blood Group. b. Estimation and Demonstration of ESR c. Estimation and Demonstration of PCV.	CO1, CO2
	Unit 4		
		a. Demonstration of SMT b. Effect of temperature on SMT c. Effect of two successive stimuli on skeletalmuscle contraction & Genesis of fatigue inskeletal muscle.	CO2, CO5
	Unit 5		
		a. Effect of increasing strength of stimuli b. Effect of increasing frequency c. Effect of load on skeletal muscle contractionand determination of conduction velocity of sciatic nerve.	CO5, CO6

Mode of examination	Practical/Viva			
Weightage Distribution	CA	MTE	ETE	
	25%	0%	75%	
Text Book's Recommended	1) Manual of Practical Physiology ForPhysical Therapy, OccupationalTherapy,MLT andOther AlliedCourses by Dr A.K.Jain 2) A Text book of Practical Physiology by C.L.Ghai. 3) A Text Book of PracticalPhysiology by G.K.Pal			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average POs	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 1st**	
1	Course Code	**PTB 133**	
2	Course Title	**BIOCHEMISTRY I (PRACTICAL)**	
3	Credits	**1**	
4	**Contact Hours (L-T-P)**	**0-0-2**	
	Course Type	CC	
5	Course Outcomes	CO1: To understand the importance of safety measures and lab protocols CO2: To understand the importance of different types of glass wares CO3: To understand the importance of different types of instruments CO4: To understand the importance of preparation of various sorts of solution CO5: To understand the importance of qualitative analysis of carbohydrates CO6: To understand the importance of different solutions.	
6	Course Description	• Safety of measurements in Laboratory, • Introduction of Glassware's • Introduction of Laboratory Equipment's • Preparation of Solutions • Qualitative analysis of carbohydrates	
	Practical's		CO mapping
	Unit 1	**Safety measures and Lab protocols**	CO1, CO2
	A	Safety measures in Biochemistry lab	
	B	General laboratory protocols	
	C	Awareness in a lab	
	Unit 2	**Introduction to Laboratory glassware's**	CO2, CO3
	A	Introduction to Laboratory glassware's -1	
	B	Introduction to Laboratory glassware's -2	

	C	Maintenance of Laboratory glassware's			
	Unit 3	**Introduction to Laboratory apparatus**			CO3, CO4
	A	Introduction to Laboratory apparatus -1			
	B	Introduction to Laboratory apparatus -2			
	C	Maintenance of Laboratory apparatus -3			
	Unit 4	**Preparation of acid and bases of different concentrations**			CO4, CO5
	A	Preparation of acids of different concentration			
	B	Preparation of bases of different concentration			
	C	Preparation of solutions of different concentration			
	Unit 5	Qualitative analysis of Carbohydrate			CO5, CO6
	A	Qualitative analysis of Carbohydrates-1			
	B	Qualitative analysis of Carbohydrates-2			
	C	Qualitative analysis of Carbohydrates-3			
	Mode of examination	Theory and Practical			
	Weightage Distribution for Practical's	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1) A text book of Medical Biochemistry by Chatterjee & Shinde 2) Text book of biochemistry for Medical students by Vasudevan and Sreekumari 3) Biochemistry by Lehringer 4) Clinical chemistry by Varley 5) Harpers Illustrated Biochemistryby Robert K.M.			

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
COs														
CO1	3	1	3	3	3	2	3	3	1	2	3	3	3	2
CO2	2	3	1	2	1	3	2	1	3	3	3	3	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	2	3	3	3	3	2	2	3	3	3	1	2
CO5	1	3	3	1	2	3	2	3	3	2	2	3	2	2
CO6	3	2	2	3	1	2	1	2	2	2	2	2	3	3
Average Pos	**2.5**	**2.33**	**2.33**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: I**	
1	Course Code	**PTB 134**	
2	Course Title	**FIRST AID AND CARDIOPULMONARY RESUSCITATION (Practical)**	
3	Credits	**1**	
4	Contact Hours(L-T-P)	**0-0-2**	
	Course Type	DSC	
5	Course Objective	**1.** to impart the skills related to first aid, basic and advanced lifesaving protocols. **2.** to train first aid, safe transport, lifesaving skills (basic and advanced) required to be both a team member and a team leader in either an in-hospital or out-of-hospital setting. **3.** to master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	CO1: To recognize and initiate the chain of survival as soon as a possible problem is identified. CO2: To understand the basic principles of first aid & CPR. CO3: To secure the life and perform transportation to hospital. CO4: To use Aids and appliances to Initiate rescue breathing & circulation when they are inadequate. CO5: To perform and lead High-quality CPR for adults, children, and infants. CO6: To formulate the applicability of CPR	
7	Course Description	Lifesaving and injury containment are the core of this course. The class will be taught using mannequins, dummies and other aids and appliances as a face-to-face workshop. Practical skills are the focus. Theory and case-based method for Self-work is also encouraged. In addition to assigning the case studies, the course instructor will spend considerable time in teaching and understanding the concept and skills of C PR through the eyes of the learner. The instructor will cover the ways to think skillfully as per guidelines using AHA, and other agencies statements .	
8	Outline syllabus		CO Mapping
	Unit 1	**First aid**	
	A	Perform Emergency safety panning – triage & transport	CO1, CO2
	B	Demonstrate First aid basics	CO1,CO2
	C	Introduction to Disaster Types and preparedness	CO1,CO2
	Unit 2	**Introduction to Resuscitation**	
	A	Demonstrate Chain of survival	CO1, CO3
	B	Demonstrate Calling for help	CO1, CO3

	C	Perform as per AHA guidelines and up-dation			CO1, CO3
	Unit 3	**Basic life support**			
	A	Perform CPR & AED			CO1,CO3, CO6
	B	Assess Circulation			CO1,CO3, CO6
	C	Assess Airway & Breathing – Bag & Mask ventilation			CO1,CO3, CO6
	Unit 4	**Advanced Cardiac life Support**			
	A	Tackle Types of arrythmias and cardiac arrest, Defibrillation			CO2,CO4
	B	Recognize Emergency cart/ crash card and its components			CO2,CO4
	C	Recognize Mechanical ventilatory support - basics			CO2,CO4
	Unit 5	**PALS and infants' life support**			
	A	Perform Pediatric advanced life support			CO1,CO5, CO6
	B	Perform Infant life support			CO1,CO5, CO6
	C	Appreciate Differences from adult life support			CO1,CO5, CO6
	Mode of examination				
		CA	ESE		
	Weightage Distribution		CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. International Liaison Committee on Resuscitation. 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations. Circulation. 2020;142(suppl 1):In press. 2. International Liaison Committee on Resuscitation. 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. Resuscitation. 2020:In press.			
	Other References	1. St John Ambulance India – Indian Red Cross Society. First Aid (English version) Authorised Manual 6th Edition. 2011. IFRC International First Aid Guidelines 2011. Belgian Red Cross Flanders. European First Aid Materials EFAM. 2011. 2. Merchant RM, Topjian AA, Panchal AR, et al. Part 1: executive summary: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2020;142(suppl 2):In press.			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	2	3	2	3	3	2	3	3	2
CO2	3	2	3	2	3	3	2	3	3	1	3	3	2	3
CO3	2	3	3	1	2	2	3	3	2	3	3	2	3	3
CO4	3	2	1	3	3	3	2	1	3	2	2	3	3	3
CO5	1	3	3	3	2	3	2	3	1	3	3	3	3	3
CO6	2	3	2	3	1	3	1	2	3	3	2	1	1	2
Average Pos	**2.33**	**2.66**	**2.33**	**2.5**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.6667**

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

Second Semester

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**PTB 116**	
2	Course Title	**HUMAN ANATOMY- REGIONAL**	
3	Credits	**5**	
4	Contact Hours (L-T-P)	**4-1-0**	
	Course Type	CC	
5	Course Objective	It is designed to provide students with the working knowledge ofthe structure of the human body which is essential foundation fortheir 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 theregions. 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 movement's inhuman 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 CO6: To evaluate the anatomical deviations and deformities.	
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 ofphysiotherapy and occupational therapy in patients.	
8	Outline syllabus		CO Mapping
	Unit 1	**Neuro Anatomy**	
	A	Organization of Central Nervous system, peripheral nervous system Spinal cord- Meninges, external and internal features, Spinal nerves , Brainstem & cranial nerves, tracts of spinal cord.	CO1, CO5

	B	Cerebrum(sulci ,gyri and functional areas), Cerebellum, Thalamus, Hypothalamus, Internal capsule , ventricle system, CSF flow, Meninges.	CO1, CO5,
	C	Blood supply to brain & spinal cord, Basal Ganglia.	CO1,CO5
	Unit 2	**Abdomen**	
	A	Anterior abdominal wall and posterior abdominal wall. 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.	CO1, CO3
	Unit 3	**Pelvis**	
	A	Pelvic diaphragm, Position, shape, size, features, blood supply of the Male reproductive system.	CO1, CO3, CO6
	B	Position, shape, size, features, blood supply of the female reproductive system.	CO1, CO3, CO6
	C	Blood supply and nerve supply of the male and female reproductive system.	CO1, CO3, CO6
	Unit 4	**Lower Extremity**	
	A	Skin, Fascia, Muscles of Gluteal region, front and back of thethigh, medial side of the lateral side of the thigh, popliteal fossa, anterior and posterior compartment of leg, sole & dorsum of the foot.	CO3, CO4, CO6
	B	Femoral triangle, femoral canal, inguinal canal Popliteal fossa, Retinaculum, arches offoot, skin of foot.	CO3, CO4, CO6
	C	Lymphatic drainage of lower limb, venous drainage of the lower limb, arterial supply & nerve supply (motor & sensory) of the lower limb,	CO3, CO4, CO6
	Unit 5	**Joints of Lower Extremity**	
	A	Hip Joint	CO2, CO3, CO6

	B	Knee joint			CO2, CO3, CO6
	C	Ankle joint, joints of the foot.			CO2, CO3, CO6
	Mode of examination	**Theory/jury/Practical/Viva**			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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 OrientedAnatomy. 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	PSO1	PSO2	PSO3
CO1	3	1	3	3	2	3	3	2	2	3	2	2	2	2
CO2	2	2	2	1	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	2	2	2	1	2	3	3	2	3	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	2	3	3
CO6	2	3	2	3	3	2	3	1	2	3	2	1	1	2
Average Pos	**2.16**	**2.16**	**2.33**	**2.33**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**HPY201**	
2	Course Title	**HUMAN PHYSIOLOGY-II**	
3	Credits	**4**	
4	Contact Hours (L-T-P)	**4-0-0**	
	Course Type	CC	
5	Course Objective	● To learn and understand the fundamental scientific concepts relating to a broad range of topics in human physiology. ● To make the students familiar with the basic factual information concerning the mechanisms and functioning of humans body system. ● To develop investigative skills and to become familiar with standard techniques of measurement. ● To help the students to gain practice and confidence in applying this knowledge, in a quantitative manner where appropriate, to actual experiments.	
6	Course Outcomes	CO1:To define the physiology of the different system of the human body CO2: To explain the importance, function and function of Excretory system of body CO3:To get the information about Endocrine system CO4: To describe the Nervous system and its function CO5: To explain the reproductive system and its function CO6:To analyze about special senses of the body	
7	Course Description	● Physiology of Excretion system ● Endocrine system ● Nervous system ● Reproductive system ● Special Senses	
8	Outline syllabus		CO Mapping
	Unit 1	**The Excretory System**	
	A	Physiological anatomy of kidney, structure and functions of excretory system, structure of nephron.	CO3, CO4
	B	Mechanism of formation of Urine. & mechanism of concentration and dilution of urine.	CO3, CO4
	C	The Countercurrent System: Physiology of micturition and Regulation of Body Temperature in Humans.	CO3, CO4
	Unit 2	**Endocrine system**	

	A	General principles of endocrinology, The pituitary Gland.			CO3, CO5
	B	The Thyroid Gland, The parathyroid, Calcitonin and Vitamin D			CO3, CO5
	C	The Adrenal Cortex & Pancreas.			CO3, CO5
	Unit 3	**Reproductive system**			
	A	Changes during Puberty, Classification of Male sex hormones and their functions, Spermatogenesis & semen.			CO3, CO5
	B	Changes during Puberty, Classification and Functions of female sex hormones, menstruation, ovulation and contraception.			CO3, CO5
	C	Physiological changes during pregnancy, functions of placenta and physiology of lactation.			CO3, CO5
	Unit 4	**Nervous system**			
	A	Organization of Nervous system, The Synapse , Physiology of receptor organs for special and general sensation, classification and properties of reflexes, Physiology of touch, pain and temperature.			CO2, CO3
	B	Intro to Sensory and motor system. Sensory and Motor Tracts of spinal cord, Functions of hypothalamus, thalamus, basal ganglia, cerebrum & cerebellum. Upper and Lower Motor neuron Lesion			CO2, CO3
	C	Autonomic nervous system, Regulation of posture, Cerebrospinal Fluid and Blood Brain Barrier.			CO2,CO3
	Unit 5	**Special Senses**			
	A	Taste and Olfaction.			CO1,CO3
	B	Vision—structure and function of the eye, errors of refraction & their correction. Color blindness.			CO1, CO3
	C	Hearing—structure and function of ear, general outline of mechanism of hearing and perception of sound.			CO1, CO3
	Mode of examination	Theory/jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1- Textbook Of Physiology Volume 1 & 2 AK Jain 2.Guyton and Hall Textbook of Medical Physiology 3.Medical Physiology-GK Pal and Parvati Pal			

	Other references	1. Sam san writes applied physiology handbook -byCyril a keeleericB.Neil 2. Best and Taylor's physiological basic of Medicalpractice- C.H. Best aetal 3. Medical physiology Dr. A.C. Gutton. Review of MedicalPhysiology William FooGanong	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average POs	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

1. Slight (Low)

2-Moderate Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: II**	
1	Course Code	**PTB 113**	
2	Course Title	**Principles of Biophysical Agents**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**2-0-0**	
	Course Type	CC	
5	Course Objective	After the completion of the course the student shall be having the basic knowledge of the principles and the clinical application of Biophysical agents used in the Physiotherapy for the treatment and diagnosis purpose	
6	Course Outcomes	CO1: Understand the principles, physiological effects and uses of Therapeutic Electric currents. CO2: Understand the principles, physiological effects and uses of Thermal Agents. CO3: Understand the principles, physiological effects and uses of Electromagnetic radiations like ultraviolet radiations and Laser CO4: Understand the principles, physiological effects and uses of Therapeutic Ultrasound CO5: Understand the principles, physiological effects and uses of Hydrotherapy. CO6: to understand the applicability of biophysical agents in various therapeutic modalities	
7	Course Description	The course contains the basic understanding of the principles governing Biophysical Agents used in Physiotherapy and their clinical application	
8	Outline syllabus		CO Mapping
	Unit 1	**Electric Currents**	**CO1**
	A	Current electricity, Principles of electric currents, Electromagnetic spectrum	
	B	Physiological Effects of electric currents	
	C	Clinical application of electric currents	
	Unit 2	**Thermal Agents- Heat and Cold**	**CO2, CO6**
	A	Physical Principles of Thermal Energy	
	B	Physiological Effects and uses of Thermotherapy	
	C	Physiological Effects and uses of Cryotherapy	
	Unit 3	**Electromagnetic Radiations**	**CO3, CO6**

	A	Principles of production and application of Ultraviolet Radiations			
	B	Principles of Production and application of Laser			
	C	Physiological effects and uses of Ultraviolet radiations and Laser			
	Unit 4	**Ultrasound**			**CO4**
	A	Principles of production and application of Ultrasound			
	B	Physiological Effects : Thermal, Non Thermal			
	C	Uses of ultrasound			
	Unit 5	**Hydrotherapy**			**CO5, CO6**
	A	Principles and Physical Properties of water			
	B	Physical effects of Hydrotherapy			
	C	Uses of Hydrotherapy			
	Mode of examination	Theory/jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Claytons Electro Therapy, CBS Publishers & Distributors 2. Low & Reed, Electro therapy Explained , Butterworth-Heinemann Limited, 2000			
	Other References	1. Nelson & Currier, Clinical Electro Therapy Appleton & Lange. 2. Kahn, Electro Therapy , Churchill Livingstone, 2000			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	1	3	3	3	2	3	2	3	2
CO2	3	2	3	2	3	3	2	2	3	1	3	3	2	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	3	2	3	3	2	3	3	2	1	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	3	1	3
CO6	2	3	2	3	3	2	3	1	2	3	2	2	1	2
Average Pos	**2.16**	**2.5**	**2.33**	**2.66**	**2.66**	**2.33**	**2.5**	**2.33**	**2.5**	**2.33**	**2.33**	**2.33**	**2.16**	**2.5**

School: SSAHS	**Batch: 2023-2027**		
Programme: BPT	.		
Branch: Physiotherapy	**Semester: 2ND**		
1	Course Code	**PTB 114**	
2	Course Title	**Fundamental of exercise science**	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	DSE	
5	Course Objective	Describe rephosphorylation of ATP, anaerobic glycolysis and oxidative phosphorylation energy system 2. Describe characteristics of creatinine phosphate, anaerobic glycolysis and oxidative phosphorylation energy system and explain how it is used to replace ATP during exercise. 3. Explain the process of aerobic metabolism of carbohydrates, fats and protein, and concept of fuel utilization. 4. Explain the effect of exercise on respiratory and circulatory system	
6	Course Outcomes	CO1: At the completion of course the student shall be able to describe the basics of energy utilized during exercise, types and benefits of exercise. CO2: Discuss and explain physiology of respiration, major energy system utilized during exercise. CO3: Illustrate fat and protein synthesis CO4: Explain energy utilized during fed, fast and starvation CO5: Justify the effect of exercise on respiratory and circulatory systems. CO6: Design the science that are involved during exercise.	
7	Course Description	At the end of the course, the candidate will have a better understanding of the energy system utilized during and after Exercise. 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 Energy for Exercise**	**CO1, CO2**
	A	Energy for exercise: ATP basics, hydrolysis of ATP, re-phosphorylation of ADP to ATP, ATP and energy used by muscle.	
	B	Definition of exercise, types of exercise, benefit of exercise. Meaning of Physiology and Exercise Physiology, Importance & functions of Exercise Physiology in the field of Physical Education.	
	C	Physiology of respiratory system and types of respiration, mechanism of inhibition and exhibition,	
	Unit 2	**Major Energy system**	**CO1, CO2**

	A	Creatinine phosphate: characteristics of the creatinine phosphate energy system, and how it is used to replace ATP during exercise.			
	B	Anaerobic glycolysis: Specific characteristics of the anaerobic glycolysis energy system, and how it is used to replace ATP during exercise			
	C	Oxidative phosphorylation: characteristics of the oxidative phosphorylation (aerobic) energy system and how it is used to replace ATP during exercise. Krebs cycle			
	Unit 3	**Fats and Protein synthesis**			**CO1,CO3**
	A	Process of aerobic metabolism of carbohydrates, fats, and proteins (amino acids),			
	B	Concept of measuring fuel utilization with the respiratory exchange ratio,			
	C	Factors that influence fuel utilization.			
	Unit 4	**Energy utilized**			**CO1,CO4**
	A	Energy utilized during fed, fast and starvation,			
	B	Caloric intake and caloric expenditure, O2 consumption			
	C	Body response to exercise: lactic acid, glycogen store, muscle, recovery time			
	Unit 5	**Effect of exercise**			**CO5,CO6**
	A	Respiratory and circulatory system, level of lactic, water and heat affected by exercise			
	B	Body recovery from exercise, effects of exercise on the heart, lungs, skeleton and muscles.			
	C	Long term effect of exercise, testing cardiovascular fitness, speed, flexibility, balance, agility and muscle endurance.			
	Mode of examination	Theory/jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Housh, T. J., Housh, D. J., & Johnson, G. O. (2017). *Introduction to exercise science (5th ed.).* Scottsdale, AZ: Holcomb Hathaway. 2.Basic Anatomy of Physiology of exercise-Piyush Jain 3. Introduction to anatomy & Physiology of Exercise- Sandhya Tiwari 4. Essential of Exercise Physiology – Lessy G. Shower. 5. Guyton, A.C. Text Book of Medical Physiology, W.B. Sunders Company, Philadelpjia, 1981. 6. Devries, H.A.Physiology of Exercise for Physical Education and Athletics. London: Staoles Press, 1976			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	1	2	3	3	2	3	3	3	2	2	3
CO2	2	3	3	3	3	2	3	3	2	2	3	1	3	2
CO3	3	3	3	2	3	2	1	3	2	3	3	3	3	3
CO4	3	2	2	3	1	3	2	1	3	2	3	3	2	2
CO5	1	3	2	3	3	3	3	3	2	3	1	2	1	2
CO6	1	2	3	2	2	3	2	2	3	1	2	3	2	3
Average Pos	**2.16**	**2.5**	**2.66**	**2.33**	**2.33**	**2.66**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 2ND**
1	Course Code	**PTB 115**
2	Course Title	**Nutrition**
3	Credits	**1**
4	Contact Hours (L-T-P)	**1-0-0**
	Course Type	AEC
5	Course Objective	To understand the basic knowledge of food chemistry, nutritive value of different foods, and role of macronutrient for energy contribution in body.
6	Course Outcomes	CO1: Understand the basic concept of nutrients CO2: Understand the food guide pyramid and food groups CO3: Knowledge of basic nutrients and their functions. CO4: Understand the role of micronutrients in human body CO5: To understand the role of protein in human body CO6: To formulate the applicability of nutrition in human body.
7	Course Description	The course "Fundamentals of Food and Nutrition" aims at developing basic understanding about nutrition, its effect on human health and newer advances in food technology. This course encompasses physiological, biochemical and social aspects of food and discusses relationship between metabolites and human health. Moreover, the course is focused on the advances in the most emerging area of applied science of Nutraceuticals (where food is the medicine). The knowledge of nutrition under
		extreme climate conditions, space nutrition, and sports nutrition empowers students' knowledge and skills to utilize food as a powerful tool for physical, mental, and social wellbeing.

8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to Nutrition**	
	A	Introduction to nutrition -Food as source of nutrients, functions of food	CO1
	B	Basic definition, function, classification and dietary sources of foods, nutrition and dietetics	CO1
	C	Concept of malnutrition,	CO1
	Unit 2	**Food Guide and water**	
	A	Food guide - Basic five food groups. How to use food guide (according to R.D.A.)	CO2
	B	Use of food in body-Digestion, absorption , transport and utilization	CO2
	C	Role of enzymes and hormones in digestion Water - as a nutrient, function, sources	CO2

	Unit 3	**Carbohydrates**	
	A	Carbohydrates: classification, food sources, storage in body.	CO3
	B	Carbohydrate: digestion and absorption	CO3
	C	Carbohydrate: Health Effects Regulation of the blood glucose level	CO3
	Unit 4	**Lipids and Protiens**	
	A	Lipids : Classification, health benefits of lipids Proteins : Classification and its role in body Proteins in Food	CO4
	B	Lipids: Digestion, Absorption and transport Protein: Digestion, Absorption and transport	CO4
	C	Lipids: Role in body Lipids in food Proteins role in body	CO3
	Unit 5	**Role of mineral and vitamins in body**	
	A	Functions, Sources, Bioavailability	CO3, CO6
	B	Deficiency Disease	CO4, CO6
	C	Deficiency Disease- Treatment and Prevention	CO3, CO6
	Mode of examination	Theory/jury/Practical/Viva	
	Weightage Distribution	CA: 25% / MTE: 25% / ETE: 50%	
	Text Book	• Nutrition Science- B.Srilakshmi • Text of Human Nutrition-Anjana Agarwal, Shobha Agarwal	

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	3	1	2	3	3	2	3	3	3	2	3	2
CO2	3	2	3	3	3	2	2	3	2	2	3	1	3	3
CO3	3	2	3	2	3	3	3	3	2	3	3	3	1	3
CO4	1	3	2	3	2	2	3	2	3	2	3	3	2	1
CO5	3	3	2	3	1	2	1	3	2	3	1	2	3	3
CO6	2	3	3	2	2	3	1	2	3	1	2	3	2	2
Average Pos	**2.33**	**2.66**	**2.66**	**2.33**	**2.16**	**2.5**	**2.16**	**2.5**	**2.5**	**2.33**	**2.5**	**2.33**	**2.33**	**2.33**

Practical

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**ARP102**	
2	Course Title	**Communicative English-2**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**1-0-2**	
	Course Type		
5	Course Objective	To Develop LSRW skills through audio-visual language acquirement, creative writing, advanced speech et al and MTI Reduction with the aid of certain tools like texts, movies, long and short essays.	
6	Course Outcomes	After completion of this course, students will be able to: CO1 Acquire Vision, Goals and Strategies through Audio-visual Language Texts CO2 Synthesize complex concepts and present them in creative writing CO3 Develop MTI Reduction/Neutral Accent through Classroom Sessions & Practice CO4 Determine their role in achieving team success through defining strategies for effective communication with different people CO5 Realize their potentials as human beings and conduct themselves properly in the ways of world. CO6 Acquire satisfactory competency in use of Quantitative aptitude and Logical Reasoning	
7	Course Description	The course takes the learnings from the previous semester to an advanced level of language learning and self-comprehension through the introduction of audio-visual aids as language enablers. It also leads learners to an advanced level of writing, reading, listening and speaking abilities, while also reducing the usage of L1 to minimal in order to increase the employability chances.	
8	Outline syllabus		CO Mapping
	Unit 1	**Acquiring Vision, Goals and Strategies through Audio-visual Language Texts**	CO1
	A	Pursuit of Happiness / Goal Setting & Value Proposition in life	
	B	12 Angry Men / Ethics & Principles	CO1
	C	The King's Speech / Mission statement in life | strategies & Action Plans in Life	CO1
	Unit 2	**Creative Writing**	CO2
	A	Story Reconstruction - Positive Thinking	
	B	Theme based Story Writing - Positive attitude	
	C	Learning Diary Learning Log – Self-introspection	
	Unit 3	**Writing Skills 1**	

	A	Precis			CO2
	B	Paraphrasing			
	C	Essays (Simple essays)			
	Unit 4	**MTI Reduction/Neutral Accent through Classroom Sessions & Practice**			CO3
	A	Vowel, Consonant, sound correction, speech sounds, Monothongs, Dipthongs and Tripthongs			
	B	Vowel Sound drills , Consonant Sound drills, Affricates and Fricative Sounds			
	C	Speech Sounds | Speech Music| Tone | Volume| Diction |Syntax |Intonation | Syllable Stress |			CO3
	Unit 5	**Gauging MTI Reduction Effectiveness through Free Speech**			CO3
	A	Jam sessions			
	B	Extempore			
	C	Situation-based Role Play			
	Unit 6	**Leadership and Management Skills**			CO4
		Innovative Leadership and Design Thinking			
		Ethics and Integrity			
	Unit 7	**Universal Human Values**			CO5
		Love & Compassion, Non-Violence & Truth			
		Righteousness, Peace			
		Service, Renunciation (Sacrifice)			
	Unit 8	**Introduction to Quantitative aptitude & Logical Reasoning**			CO6
		Analytical Reasoning & Puzzle Solving			
		Number Systems and its Application in Solving Problems			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		60%	NA	40%	
	Text book/s*	• Wren, P.C.&Martin H. High English Grammar and Composition, S.Chand& Company Ltd, New Delhi. • Blum, M. Rosen. How to Build Better Vocabulary. London: Bloomsbury Publication • Comfort, Jeremy(et.al). Speaking Effectively. Cambridge University Press. • The Luncheon by W.Somerset Maugham - http://mistera.co.nf/files/sm_luncheon.pdf			

COs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO 1	PSO2	PSO3
ARP102.1	-	-	-	-	-	-	-	-	1	3	1	2	-	-	-
ARP102.2	-	-	-	-	-	-	-	-	1	3	1	2	-	-	-
ARP102.3	-	-	-	-	-	-	-	-	1	3	1	2	-	-	-
ARP102.4	-	-	-	-	-	-	-	-	1	2	1	2	-	-	-
ARP102.5	-	-	-	-	-	-	-	-	1	2	1	2	-	-	-
ARP102.6	1	-	-	-	-	-	-	-	1	2	1	2	-	-	-

4-Slight (Low)

5-Moderate(Medium)

6-Substantial(High)

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 2ND**
1	Course Code	**PTB 146**
2	Course Title	**HUMAN ANATOMY- REGIONAL (PRACTICAL)**
3	Credits	**2**
4	Contact Hours (L-T-P)	**0-0-4**
	Course Type	CC

5	Course Objective	It is designed to provide students with the working knowledge ofthe structure of the human body which is essential foundation fortheir 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 theregions. 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 movement's inhuman 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 CO6: To evaluate the anatomical deviations and deformities.	
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	CNS & PNS	CO1,CO5
	B	Cranial cavity, vertebrae	
	C	Demonstration & Examination	
	Unit 2	**Abdomen**	
	A	Organs of GIT	CO1,CO3
	B	Surface Anatomy	

	C	Demonstration & Examination			
	Unit 3	**Pelvis**			
	A	Pelvic bone osteology			CO1,CO3, CO6
	B	Male and female pelvic			
	C	Demonstration & Examination			
	Unit 4	**Lower Extremity**			
	A	Osteology of bones of lower limb			CO3,CO4,
	B	Surface Anatomy			CO6
	C	Demonstration & Examination			
	Unit 5	**Joints of Lower Extremity**			
	A	Joints and deformity			CO2,CO3, CO6
	B	Movements			
	C	Demonstration			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1. B D Chaurasia's Human Anatomy. 2. Inderbir Singh- Textbook of Anatomy. 3. Textbook of Anatomy with color Atlas-InderbirSingh. 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	PSO1	PSO2	PSO3
CO1	3	1	3	3	2	3	3	2	2	3	2	2	2	2
CO2	2	2	2	1	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	2	2	2	1	2	3	3	2	3	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	2	3	3
CO6	2	3	2	3	3	2	3	1	2	3	2	1	1	2
Average Pos	**2.16**	**2.16**	**2.33**	**2.33**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**PTB 142**	
2	Course Title	**HUMAN PHYSIOLOGY II (PRACTICAL)**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	CC	
5	Course Objective	The objective of this course is that after lectures, demonstrations, practical and clinics the student will be ableto demonstrate an understanding of elementary human physiology	
6	Course Outcomes	CO1: Define DLC with its clinicalaspects. CO2: Demonstrate the Human andamphibian experiments in Clinics related with physiotherapy. CO3: experiment of General and systemic examination of various systems with their clinical aspects. CO4: To analyze the physiological ad clinical aspects of Bloodpressure and Radial pulse measurement in addition to CVS examination. CO5: To explain the cardiac muscle properties with the help of graphs and charts and their importance in clinics. CO6: Discuss the Clinical Examination of Cranial nerves and properties of cardiac muscle.	
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 diseaseand practice of Physiotherapy as applicable for each systemic disorder	
8	Outline syllabus		CO Mapping
	Unit 1	**DLC**	
	A	Differential Leucocyte Count.	CO1
	B	Demonstration	
	C	Experimentation	
	Unit 2	**B.P. & RADIAL PULSE Examination**	
	A	Arterial Blood Pressure and radial pulse.	CO2, CO3,CO 4,CO5
	B	Effect of Exercise on B.P.	
	C	Effect of Posture on B.P.	
	Unit 3	**General & systemic clinical examination**	
	A	General Clinical Examination	CO2,C O3,CO4
	B	Clinical Examination of CVS	

	C	Clinical Examination of Respiratory System			
	Unit 4	**Clinical examination of nervous system**			
	A	Clinical Examination of Cranial nerves			CO2,CO3, CO4
	B	Clinical Examination of Sensory system			
	C	Clinical Examination of Motor system.			
	Unit 5	**Properties of cardiac muscle**			
	A	Demonstration of normal frog cardiogram			CO5, CO6
	B	Effect of temperature on it			
	C	Demonstration			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1) ManualofPracticalPhysiologyForPhysicalTherapy,Occupational Therapy,MLTand OtherAlliedCourses by Dr A.K.Jain 2) A Text book of Practical Physiology by C.L.Ghai. 3) A Text Book of Practical Physiology by G.K.Pal			
	Other references	1. Sam san writes applied physiology handbook -byCyril a keeleeric B.Neil 2. Best and Taylor's physiological basic of Medicalpractice- C.H. Best and Taylor 3. Medical physiology Dr. A.C. Gutton. 4. Review of Medical Physiology William Foo Ganong			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average POs	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**PTB 143**	
2	Course Title	**Principles of Biophysical Agents (Practical)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	CC	
5	Course Objective	After the completion of the course the student shall be having the basic knowledge of the principles and the clinical application of Biophysical agents used in the Physiotherapy for the treatment and diagnosis purpose	
6	Course Outcomes	CO1: Understand the principles, physiological effects and uses of Therapeutic Electric currents. CO2: Understand the principles, physiological effects and uses of Thermal Agents. CO3: Understand the principles, physiological effects and uses of Electromagnetic radiations like ultraviolet radiations and Laser CO4: Understand the principles, physiological effects and uses of Therapeutic Ultrasound CO5: Understand the principles, physiological effects and uses of Hydrotherapy CO6: to understand the applicability of biophysical agents in various therapeutic modalities	
7	Course Description	The course contains the basic understanding of the principles governing Biophysical Agents used in Physiotherapy and their clinical application.	
8	Outline syllabus		CO Mapping
	Unit 1	**Electric Currents**	**CO1**
		Identification and Demonstration of application methods of therapeutic electric current stimulators.	
	Unit 2	**Thermal Agents- Heat and Cold**	**CO2, CO6**
		Identification and Demonstration of application methods of Thermotherapy.	
	Unit 3	**Electromagnetic Radiations**	**CO3, CO6**
		Identification and Demonstration of application methods of Ultraviolet radiations and Laser.	
	Unit 4	**Ultrasound**	**CO4, CO6**
		Identification and Demonstration of application methods of therapeutic ultrasound.	
	Unit 5	**Hydrotherapy**	**CO5, CO6**

	A	Identification and Demonstration of application methods of hydrotherapy.			
	Mode of examination	Practical/Viva			
	Weig htage Distri bution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1. Claytons Electro Therapy, CBS Publishers & Distributors 2. Low & Reed, Electro therapy Explained , Butterworth-Heinemann Limited, 2000			
	Other references	1. Nelson & Currier, Clinical Electro Therapy Appleton & Lange. 2. Kahn, Electro Therapy , Churchill Livingstone, 2000			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	1	3	3	3	2	3	2	3	2
CO2	3	2	3	2	3	3	2	2	3	1	3	3	2	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	3	2	3	3	2	3	3	2	1	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	3	1	3
CO6	2	3	2	3	3	2	3	1	2	3	2	2	1	2
Average Pos	**2.16**	**2.5**	**2.33**	**2.66**	**2.66**	**2.33**	**2.5**	**2.33**	**2.5**	**2.33**	**2.33**	**2.33**	**2.16**	**2.5**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**PTB 144**	
2	Course Title	**Fundamental of exercise science (Practical)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	DSC	
5	Course Objective	Describe rephosphorylation of ATP, anaerobic glycolysis and oxidative phosphorylation energy system 2. Describe characteristics of creatinine phosphate, anaerobic glycolysis and oxidative phosphorylation energy system and explain how it is used to replace ATP during exercise. 3. Explain the process of aerobic metabolism of carbohydrates, fats and protein, and concept of fuel utilization. 4. Explain the effect of exercise on respiratory and circulatory system	
6	Course Outcomes	CO1: At the completion of course the student shall be able to describe the basics of energy utilized during exercise, types and benefits of exercise. CO2: Discuss and explain physiology of respiration, major energy system utilized during exercise. CO3: Illustrate fat and protein synthesis CO4: Explain energy utilized during fed, fast and starvation CO5: Justify the effect of exercise on respiratory and circulatory systems. CO6: Design the science that are involved during exercise.	
7	Course Description	At the end of the course, the candidate will have a better understanding of the energy system utilized during and after Exercise. The student's skill will be enhanced through hands on training provided during the practical hours.	
8	Outline syllabus		CO Mapping
	Unit 1	**Energetics of Exercise**	CO1, CO2
		ATP & Muscular Work .Oxygen Consumption BMR and its influence during Exercise	
	Unit 2	**Physiological system during exercise**	CO1, CO2
		Respiratory System Responses to Exercise Cardiovascular System Responses to Exercise Endocrine and Immune System Responses to Exercise	
	Unit 3	**Biochemical aspect of exercise**	CO1, CO3
		Aerobic exercise Anaerobic exercise Respiratory exchange ratio	
	Unit 4	**Exercise in health fitness and disease**	CO1, CO4

		Exercise and Weight Control Exercise for lifestyle Physical activity			
	Unit 5	**General Exercise science and public health**			CO1, CO6
		Endurance exercise General exercise for Pediatric General exercise for geriatrics			
	Mode of examination	Practical/Viva			
	Weigh tage Distrib ution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1. Housh, T. J., Housh, D. J., & Johnson, G. O. (2017). *Introduction to exercise science (5th ed.).* Scottsdale, AZ: Holcomb Hathaway. 2.Basic Anatomy of Physiology of exercise-Piyush Jain 3. Introduction to anatomy & Physiology of Exercise- Sandhya Tiwari 4. Essential of Exercise Physiology – Lessy G. Shower. 5. Guyton, A.C. Text Book of Medical Physiology, W.B. Sunders Company, Philadelpjia, 1981. 6. Devries, H.A.Physiology of Exercise for Physical Education and Athletics. London: Staoles Press, 1976.			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	1	2	3	3	2	3	3	3	2	2	3
CO2	2	3	3	3	3	2	3	3	2	2	3	1	3	2
CO3	3	3	3	2	3	2	1	3	2	3	3	3	3	3
CO4	3	2	2	3	1	3	2	1	3	2	3	3	2	2
CO5	1	3	2	3	3	3	3	3	2	3	1	2	1	2
CO6	1	2	3	2	2	3	2	2	3	1	2	3	2	3
Average Pos	**2.16**	**2.5**	**2.66**	**2.33**	**2.33**	**2.66**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: Physiotherapy		**Semester: 2ND**	
1	Course Code	**PTB 145**	
2	Course Title	**Yoga Science (Practical)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	AEC	
5	Course Objective	Student will be able to perform various perform of Yoga asana, pranayama & Mudras. In addition, the student will be able to fulfill with 75% accuracy (as measured by written & oral internal evaluation) the following objectives of the course	
6	Course Outcomes	CO1: Remembering the concepts of yogic sciences. CO2:Understanding various asanas, pranayama, kriyas, & Mudras. CO3: Understanding various types of meditations. CO4: Applying knowledge in demonstration of Kiriyas, Asanas, Pranayams, Mudras, and Meditations. CO5: Applying the knowledge of yogic exercises for improving functioning of various body systems C06 : To formulate the applicability of various asanas.	
7	Course Description	This course is designed to provide students' knowledge of various asanas, pranayama, kriyas, mudras of Yoga, meditation and its application in different musculoskeletal conditions & athletes	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction of AstangaYoga :Bahirang Yoga & Antarang Yoga**	**CO1**
		Brief Demonstration Practice	
	Unit 2	**Asanas and Pranayama**	**CO2, CO6**
		Brief Demonstration Practice	
	Unit 3	**Kriyas**	**CO2, CO4, CO6**
		Brief Demonstration Practice	
	Unit 4	**Mudras and Meditations**	**CO2, CO3,CO4**

		Brief Demonstration Practice			
	Unit 5	**Yoga**			**CO1, CO5**
	A	Brief Demonstration Practice.			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	1. George Feuerstein, Text Book of Yoga. London: MotilalBansaridass Publishers (P) Ltd. 2. Gore, Anatomy and Physiology of Yogic Practices. Lonavata: KanchanPrkashan. 3. Helen Purperhart , The Yoga Adventure for Children. Netherlands: A Hunter House book. 4. Iyengar, B.K.S, Light on Yoga. New Delhi: Harper Collins Publishers			
	Other References	1. Karbelkar N.V. PatanjalYogasutraBhashya (Marathi Edition) Amravati: Hanuman VyayamPrasarakMandal 2. Kenghe. C.T. Yoga as Depth-Psychology and para-Psychology (Vol-I): Historical Background, Varanasi: BharataManishai.			
		3. Kuvalyananada Swami & S.L. Vinekar, Yogic Therapy – Basic Principles and Methods. New Delhi: Govt. of India, Central Health Education and Bureau. 4. Moorthy A.M. &Alagesan. S. Yoga Therapy. Coimbatore: Teachers Publication House			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	1	2	3	3	2	3	3	3	2	3	3
CO2	1	3	3	3	3	2	3	3	2	2	3	3	2	2
CO3	3	1	3	2	3	2	3	3	2	3	3	3	3	3
CO4	3	2	1	3	1	3	2	2	3	2	3	2	2	3
CO5	2	3	3	3	3	3	2	3	2	3	1	1	2	1
CO6	3	2	2	2	2	3	3	2	3	1	2	2	3	1
Average Pos	**2.33**	**2.33**	**2.33**	**2.33**	**2.33**	**2.66**	**2.66**	**2.5**	**2.5**	**2.33**	**2.5**	**2.16**	**2.5**	**2.16**

Third Semester

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: SSAHS		**Semester:3rd**
1	Course Code	PTB 201
2	Course title	PATHOLOGY
3	Credits	2
4	Contact Hours (L-T-P)	2-0-0
	Course Type	CC
5	Course Objective	The student will be able tounderstand the concepts of cell injury and changes in relation towards the pathological effects ofinfectious and non infectious diseases &understand the disease process ,the clinical significance (with special emphasis on neuro-musculoskeletal and cardio-respiratorysystem)
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 Clinical pathological Correlation of common infection. Able to 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 andfeatures diagnosis and prognosis in different tissues and organs of the body. They are able to characterize, understand the pathogenicity of disease. CO4: Understand in brief, about the Hematological diseases and their resultant effects on the human body. CO5: Understand in brief, about the general features, pathogenicity, diagnosis, treatment and prevention CO6: to understand the investigations for various infections, cell injury and other pathology in the human body.

7	Course Description	The course is designed to develop the basic knowledge about the concept of injury, its healing process and its resultant effects on the human body. Pathology is the study of the causes and effects of disease or injury. The word pathology also refers to the study of disease in general, incorporating a wide range of biology research fields and medical practices. However, when used in the context of modern medical treatment, the term is often used in a narrower fashion to refer to processes and tests which fall within the contemporary medical field of "general pathology", an area which includes a number of distinct but inter-related medical specialties that diagnose disease, mostly through analysis of tissue, cell, and body fluid samples.	
8	Outline syllabus		CO Mapping
	Unit 1	**General Pathology**	
	A	1)Cell injury 2) Irreversible cell injury 3) Extra- cellular accumulation-amyloidosis, Pigments and pigmentations	CO1,C02
	B	**Inflammation and repair** 1)Acute inflammations 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.	CO1,CO2
	Unit 2	**Vascular disorder**	
	A	Hyperemia /Ischemia and Hemorrhage Edema: Pathogenesis and types. Chronic venous congestion: Lung , Systemic Pathology Thrombosis and Embolism: Formation, Fate and Effects. Infarction: Types, Common sites Shock: Pathogenesis, types, morphologic changes.	CO2
	B	**Growth Disturbances:** **1)** Atrophy, Hypertrophy, Hyperplasia, Aplasia, Hypoplasia, Metaplasia, Malformation, Agenesis, dysplasia. Precancerous lesions.	CO2
	C	**Genetic disorders:** Genetic Disorders–. Basic concepts of genetic disorders and some common examples and congenital malformation.	CO2, CO6
	Unit 3	**Hematology**	
	A	Nutritional anemia's, Acquired hemolytic anemias.	CO4, CO6
	B	Haemostatic disorders, Vascular and Platelet disorders& lab diagnosis.	CO4, CO6
	C	Coagulopathies, Leukocytic disorders, Leukemia, Blood transfusion	CO4, CO6
	Unit 4	**Neoplasia**	

	A	Neoplasia: Definition, classification, Biological behaviour: Benign and Malignant, Carcinoma and Sarcoma. Malignant Neoplasia: Grades and Stages, Local & Distant spread.	CO3
	B	Carcinogenesis: Environmental carcinogens, chemical, viral, occupational, Heredity and cellular oncogenes and prevention of cancer.	CO3
	C	Benign & Malignant epithelial tumours Eg. Squamous papilloma, Squamous cell carcinoma, Malignant melanoma. Benign& Malignant mesenchymal tumours Eg: Fibroma, Lipoma, Neurofibroma, Fibrosarcoma,Liposarcoma, Rhabdo-myosarcoma, Teratoma.	CO3
	Unit 5	**Introduction, general features, pathogenicity,**	
		diagnosis, treatment and prevention	
	A	Polio virus	CO5, CO6
	B	Hepatitis, Herpesvirus	CO5, CO6
	C	HIV	CO5, CO6

	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Text book of pathology by Harsh Mohan 2. Basic pathology by cotran Kumar Robbins			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average Pos	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch:Pharma		**Semester:3rd**	
1	Course Code	PTB 202	
2	Course Title	Pharmacology	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	DSC	
5	Course Objective	1.Introduce the students to basic pharmacology of various common medication used and its effects on patients in physical therapy 2.Treatment of ailment of cardiovascular system , GIT,endocrine system,by drugs 3. To make student understand the drug and physiotherapy contribution in the	
		outcome of the treatment.	
6	Course Outcomes	CO1: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	CO1
	B	Routes of drug administration,Distribution of drugs,Metabolism and Excretion of drugs .	CO1
	C	Pharmacokinetics,Pharmacodynamics, Factors modifying drug response, Adverse effects	CO1

	Unit 2	**AutonomicNervous system&Cardiovascular Pharmacology–**	
	A	General considerations- The Sympathetic and Parasympathetic Systems, Receptors, Somatic Nervous System Cholinergic and Anti-Cholinergic drugs, Adrenergic and Adrenergic blocking drugs, Peripheral muscle relaxants.	CO2
	B	Antiarrhythmic Drugs-Drugs used in the treatment of vascular disease and tissue ischemia	CO2
	C	Drugs used in the treatment of heart failure: Digitalis, Diuretics, Vasodilators, ACE inhibitors.Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors, Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators	CO2
	Unit 3	**Neuropharmacology & Disorders of Movement**	
	A	Sedative-Hypnotic Drugs: Barbiturates, Benzodiazepines Antianxiety Drugs: Benzodiazepines, Other Anxiolytics Drugs Used in Treatment to food Disorders: Monoamine Oxidase Inhibitors, Tricyclic	CO2
	B	Antidepressants, Atypical Antidepressants, Lithium d. Antipsychotic drugs	CO2
	C	Drugs used in Treatment of Parkinson'sdisease Antiepileptic Drugs, Spasticity and Skeletal Muscle Relaxants	CO2
	Unit 4	**Inflammatory/Immune Diseases**	
	A	Non-narcoticAnalgesics and NonsteroidalAnti-InflammatoryDrugs:Acetaminophen,NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interactwith NSAIDs	CO5
	B	Glucocorticoids: Pharmacological Uses of Glucocorticoid s,adverse effects, Physiologic Use of Glucocorticoids	
	C	Drugs Used in Treatment of Arthritic Diseases: Rheumatoid Arthritis, Osteoarthritis, Gout, Myasthenia gravis ,IdiopathicInflammatoryMyopathies,systemiclupusErythematous,Scleroderma,Demyelinating Disease Respiratory Pharmacology: Obstructive Airway Diseases, Drugs used in Treatment of Obstructive airway Diseases, Allergic Rhinitis.	Co5,CO6
	Unit 5	**Digestion and Metabolism & Geriatrics-**	
	A	Gastrointestinal Pharmacology: Peptic Ulcer Disease, Constipation, Diarrhea	CO4
	B	Drugs Used in Treatment of Diabetes Mellitus: Insulin, Oral Hypoglycemic	CO4

	C	Pharmacology and the geriatric Population: Adverse effects of special concern in the Elderly, Dementia, Postural hypotension			C05
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	2	2	3	3	2	2	2	3	3	3	3	3	3	2
CO2	3	2	2	2	3	3	1	2	1	3	2	2	2	2
CO3	3	2	3	1	2	2	3	3	2	3	2	2	1	2
CO4	2	2	2	3	3	3	2	1	2	2	2	2	2	3
CO5	3	2	3	3	2	2	3	2	3	2	2	3	3	3
CO6	2	2	3	2	2	2	2	3	2	3	3	3	3	2
Average	**2.5**	**2**	**2.66**	**2.33**	**2.33**	**2.33**	**2.16**	**2.33**	**2.16**	**2.66**	**2.33**	**2.5**	**2.33**	**2.33**
Pos														

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch:		**Semester:3rd**	
1	Course Code	PTB 203	
2	Course Title	Electrotherapy	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	CC	
5	Course Objective	The objective of this course is that the student will be able to list the indications and contraindications of various types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects	
6	Course Outcomes	CO1: Able to understand the various properties of elctrotherpay 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. CO6: To formulate the applicability of modalities in different 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	**Bioelectronics**	
	A	Electron theory, static and current electricity. Conductors, Insulators, Potential difference, Resistance & Intensity. Ohm's Law – Its application to AC & DC currents. Rectifying Devices – Thermionic Valves, Semiconductors, Transistors ,Amplifiers, Transducers Oscillator circuits. Capacitance, condensers in DC and AC Circuits. Display devices & indicators – analogue & digital. Effects of Current Electricity:	CO1
	B	Chemical effects - Ions and electrolytes, Ionisation,Production of a E.M.F. by chemical actions. Magnetic effects, Molecular theory of Magnetism, Magnetic fields, Electromagnetic Induction, eddycurrents ,Mili ammeter and Voltmeter, Transformers and Choke Coil	CO1

	C	Thermal Effects – Joule's Law and Heat production. Physical Principles of sound and its properties. Physical Principles of light and its properties, Electromagnetic spectrum – biophysical application, Laws of Transmission- reflection, refraction, absorption, attenuation	CO1
	Unit 2	**Low frequency current**	
	A	Physiological effects, therapeutic uses, indications and contraindications and dangers of faradic type current, intermittent galvanic current and galvanic Current Cathodal /Anodal Galvanism, Iontophoresis – withvarious ions &Pharmaco therapeutic drugs. Electrical stimulation for re-education – short /long pulse motor points Strong surged faradic current under pressure/elevation. Electrical Reactions and Electro – diagnostic tests:Electrical Stimuli and normal behavior of Nerve and muscle tissue	CO2, CO6
	B	Types of lesion and development of reaction of degeneration. - Faradic – Intermittent direct current test. - S.D. Curve and its application and characteristics Chronaxie, Rheobase& pulse ratio High voltage pulsed galvanic current	CO2, CO6
	C	TENS: Define, Principles of production, types, dosage, electrode placement, Physiological and therapeutic effects, indication and contraindications.	CO2, CO6
	Unit 3	**Medium frequency current**	
	A	Interferential therapy: Define, Principles of production, staticInterferential system, dynamic interference system, dosage, electrode placement, Physiological and therapeutic effects,indication and contraindications.	CO2,CO3
	B	Russian currents	CO2,CO3
	C	Rebox type currents	CO2,CO3
	Unit 4	**Biofeedback method**	
	A	Biofeedback method: Instrumentation, principles, therapeutic effects, indications, contraindications, limitations, precautions.	CO3,CO4
	B	Electro – diagnosis – Instrumentation, definition & basic techniques of E.M.G.	CO3,CO4
	C	operational skills and patient preparation	CO3,CO4
	Unit 5	**Other electrotherapy modalities**	
	A	Therapeutic mechanical pressure (Intermittent compression therapy) – Principle, biophysical effects, types, therapeutic effects, indications, contraindications, precautions, operational skills and patient preparation.	CO5, CO6

	B	Iontophoresis : indication , contraindication, mechanism and its effects			CO5, CO6
	Mode of examination	Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	Clayton's Electro Therapy 2 Electro therapy Explained – by Low &Reed 3 Electro Therapy – by Kahn 4 Therapeutic Electricity – by Sydney Litch			
	Other References	Clinical Electro Therapy – by Nelson & Currier			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	3	3	2	3	3	3	1	2	2	3	3	3
CO2	3	1	3	2	1	3	3	2	3	3	3	1	2	1
CO3	1	3	3	3	3	3	3	3	3	1	3	3	3	3
CO4	3	2	1	3	3	3	3	3	2	3	2	3	3	2
CO5	3	3	2	2	2	2	3	1	3	2	2	2	2	3
CO6	2	2	3	2	2	2	2	3	2	2	3	1	1	2
Average Pos	**2.33**	**2.33**	**2.5**	**2.5**	**2.16**	**2.66**	**2.83**	**2.5**	**2.33**	**2.16**	**2.5**	**2.16**	**2.33**	**2.33**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch:		**Semester:3rd**	
1	Course Code	PTB 204	
2	Course Title	Fundamentals of Biomechanics and Exercise Therapy	
3	Credits	3	
4	Contact Hours (L-T-P)	3-0-0	
	Course Type	CC	
5	Course Objective	1.Describe basic concepts of biomechanics and exercise therapy-positions, types of movements, classification 2. Demonstrate principles, application of techniques like goniometry, MMT 3. Describe types of pelvic tilt, normal and abnormal, muscle work involved. 4. Acquire knowledge of resisted exercises , types and techniques	
6	Course Outcomes	CO1: At the completion of course the student shall be able to describe the basics of mechanics involved in exercise therapy.	
		CO2: Describe and demonstrate fundamental and derived positions, CO3: Describe and demonstrate active, passive, resisted movements and soft tissue manipulation CO4: Demonstrate and apply relaxation techniques, soft tissue manipulation CO5: Describe the various biomechanics properties of joint structure and thorax region CO6: To formulate the relation between biomechanics and exercise therapy to be applied on the subjects	
7	Course Description	At the end of the course, the candidate will have a better understanding of the principles ofexercise therapy and biomechanics both basic and advanced as well as assessment techniques. The student's skillwill be enhanced through hands on training provided during the practical hours.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to Exercise Therapy**	
	A	Introduction to Exercise Therapy- TheaimsofExerciseTherapy, ThetechniquesofExercise Therapy, Approach to patient's problems, Assessment of patient's condition	CO1
	B	Starting Positions–Fundamental positions & derived Positions, Planning of Treatment	CO1, CO2
	C	Method of testing – goniometery, MMT. Measurement of LimbLength: truelimblength,apparent limblength,seg mental limblength, Measurement ofthe angle of Pelvic Inclination	CO1, CO2
	Unit 2	**Relaxation therapy and soft tissue manipulation**	

	A	Stress mechanics, types of stresses, Effects of stress on the body mechanism, Indications of relaxation, Methods &techniques of relaxation.			CO4
	B	Principles& uses: General, Local, Jacobson's ,Mitchel's, additional methods			CO4
	C	Soft tissue manipulation : indication contraindication, types, techniques Physiological and Therapeutic Uses of Specific Manipulations			CO4
	Unit 3	**Basic Concepts in Biomechanics: Kinematics and Kinetics**			
	A	Types of Motion, Location of Motion, Direction of Motion, Magnitude of Motion, Definition of Forces			CO1, CO6
	B	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, CO6
	Unit 4	**Joint, muscle structure and function**			
	A	Joint design, Materials used in human joints			CO5, CO6
	B	Joint function, Joint motion, General effects of disease,injury and immobilization.			CO5, CO6
	C	Elements of muscle structure, Muscle function,			CO5, CO6
	Unit 5	**Biomechanics of the Thorax and Chest wall**			
	A	General structure and function			CO5, CO6
	B	Rib cage and the muscles associated with the rib cage Ventilatory motions: its coordination and integration			CO5, CO6
	C	Developmental aspects of structure and function Changes in normal structure and function in relation to pregnancy, scoliosis and COPD			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	25%	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 & amp; Colby La Davis. 4) Principle of exercise therapy Gardiner cbs Delhi.			

	Other References	1) Biomechanical principles: Frenkel 2)Joint Structure &Functions :Norkins Biomechanics and kinesology- Neuman	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	2	3	2	3	3	1	2	3	3	3	3
CO2	2	3	3	3	1	3	1	2	3	3	2	1	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	1	2	3	3	2	3	2	3	3	2	3	3
CO5	1	3	2	2	2	3	3	1	3	2	2	3	2	3
CO6	3	2	3	3	1	2	2	3	2	2	1	2	2	2
Average Pos	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester:3rd**	
1	Course Code	PTB 205	
2	Course Title	**Anthropometry (Theory)**	
3	Credits	1	
4	Contact Hours (L-T-P)	1-0-0	
	Course Type	DSC	
5	Course Objective	1. To educate the students about the concepts of Anthropometry 2.To educate the students about different body measurements 3. To develop understanding about the concept of age determination and body proportion 4. To develop understanding about the methods of Somatotyping	
6	Course Outcomes	CO1. Recalling about the concepts of Anthropometry CO2. Understand about different body measurements CO3: Understand about different body composition methods CO4. Understanding the concept of age determination and body proportion CO5. Applying the concept methods of Somatotyping CO6: Evaluate performance using principles of growth, maturation and performance	
7	Course Description	The course is designed to enable the students to have knowledge and understanding about role of anthropometry.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to anthropometry**	
	A	Definition, aims and objectivesof anthropometry	CO1
	B	Planes and Axes of body	CO1
	C	Landmarks on body	CO1
	Unit 2	**Body measurements**	

	A	Lengths or heights of body parts			CO2
	B	Circumferences of body parts			CO2
	C	Skinfold thickness			CO2
	Unit 3	**Body composition-I**			
	A	Definition of body composition and its types			CO3
	B	Methods to estimate body composition: Water displacement method, Bioelectrical impedance analysis, Ultrasound assessment of fat			CO3
	C	Skinfold thickness measurements			CO3
	Unit 4	**Age Determination and Body proportion**			
	A	Skeletal Age: Methods to estimate skeletal age			CO4
	B	Dental age			CO4
	C	Body proportion			CO4
	Unit 5	**Somatotyping**			
	A	Introduction to somatotyping: Classification			CO5, CO6
	B	Heath – Carter method of somatotyping			CO5, CO6
	C	Growth, maturation and physical performance			CO5, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ESE	
		25	25	50	
	Text book/s*	1. Singh and Malhotra: Kinanthropometry, Lunar Publications 2. H.S. Sodhi: Sports Anthropometry (A Kinanthropometric Approach), Anova Publications 3. Verma and Mokha: Nutrition, Exercise and Weight Reduction, Exercise Science Publication Society 4. Ostym, Beunen and Simons: Kinanthropometry II, University Park Press, Baltimore 5. James A.P. Day: Perspectives in Kinanthropometry, Human Kinetics Publishers, Inc. Champaign, Illinois			
	Other References	1.L.S. Sidhu Et. Al: Sports Sciences – Health, Fitness and Performance, IASSPE 2. L.S. Sidhu Et. Al: Trends in Sports Sciences, IASSPE			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	3	3	2	3	3	1	2	3	3	3	2
CO2	2	3	1	2	1	3	2	1	3	3	3	3	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	2	3	3	3	3	2	2	3	3	3	1	2
CO5	1	3	3	1	2	3	2	3	3	2	2	3	2	2
CO6	3	2	2	3	1	2	1	2	2	2	2	2	3	3
Average Pos	**2.5**	**2.33**	**2.33**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT.			
Branch: BPT		**Semester:3rd**	
1	Course Code	PTB 206	
2	Course Title	Biostatistics & Research Methodology	
3	Credits	3	
4	Contact Hours (L-T-P)	2-1-0	
	Course Type	DSC	
5	Course Objective	1. To enable students, comprehend research issues 2. To enable students to identify research questions and formulate research hypothesis 3. To equip students with various techniques of research design and data collection 4. To enablestudentstosynthesizequalitativeandquantitativedatacrunchingtechniqu es	
6	Course Outcomes	CO1: To understand the basic concepts and methods of research. CO2:To enable students comprehend research issues CO3:To apply the application of descriptive statistics on data. CO4:To equip students with various techniques of research design and data collection CO5:To enable students to synthesize quantitative data crunching techniques CO6: To enable the student to formulate of research design	
7	Course Description	Tohelpthestudentstounderstandthebasicprinciplesofbiostatistics&research methodo logy and appliedtodrawtheinferencesfromthedata.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to Research**	
	A	Meaning of research, Types of research, Research Process	CO1, C O2
	B	Literature review Literature review basics	CO1, C02
		Primary data, Secondary data and exploration	
	C	Theoretical Frame work and Hypothesis Formulation Types of variables Exogenous and Endogenous variables Formulation of Hypothesis and Research question	CO1, CO2
	Unit 2	**Research Design**	
	A	Types of Research design Instrument design, Scale formation	CO2,CO3 , CO6
	B	Basics Biostatistics	CO2,CO3 , CO6

	C	Methods of data collection Questionnaires creation Sampling Design.			CO2,CO3 , CO6
	Unit 3	**Data Analysis & Interpretation**			
	A	Descriptive Analysis Normality tests			CO3,CO4 , CO6
	B	Outlier tests.			CO3,CO4 ,CO6
	C	Hypothesis testing			CO3,CO4
	Unit 4	**Referencing**			
	A	APA format MLA format			CO2,CO3
	B	Harvard Style IEEE format			CO2,CO3
	C	Report Writing.			CO2,CO3
	Unit 5	**Ethical Practices in Research**			
	A	Plagiarism			CO4,CO5
	B	Introduction to plagiarism software			CO4,CO5
	C	Legal, Governmental and other norms			CO4,CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Text book of pathology by Harsh Mohan 2. Basic pathology by cotran Kumar Robbins			

POs COs	PO 1	PO 2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	3	3	1	3	2	1	2
CO2	2	1	1	2	3	3	3	3	2	3	1	3	3	3
CO3	3	3	3	3	3	3	3	3	3	3	3	1	3	1
CO4	3	2	2	3	1	2	3	3	3	2	3	3	2	3
CO5	2	3	3	1	2	2	2	3	1	3	2	3	3	2
CO6	1	2	2	3	3	3	2	2	3	2	1	2	2	2
Average Pos	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**	**2.5**	**2.66**	**2.83**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.16**

PRACTICAL

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: BPT		**Semester:3rd**
1	Course Code	PTB 231
2	Course Title	PATHOLOGY (PR)
3	Credits	1
4	Contact Hours (L-T-P)	0-0-2
	Course Type	CC
5	Course Objective	The student will be able tounderstand the concepts of cell injury and changes in relation towards the pathological effects ofinfectious and non infectious diseases &understand the disease process ,the clinical significance (with special emphasis on neuro-musculoskeletal and cardio-respiratorysystem)
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.Ableto 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 features diagnosis and prognosis in different tissues and organs of the body. They are able to characterize, understand the pathogenicity of disease. CO4: Understand in brief, about the Hematological diseases and their resultant effects on the human body. CO5: Understand in brief, about the general features, pathogenicity, diagnosis, treatment and prevention CO6: to understand the investigations for various infections, cell injury and other pathology in the human body.
7	Course Description	The course is designed to develop the basic knowledge about the concept of injury, its healing process and its resultant effects on the human body. Pathology is the study of the causes and effects of disease or injury. The word pathology also refers to the study of disease in general, incorporating a wide range of biology research fields and medical practices. However, when used in the context of modern medical treatment, the term is often used in a narrower fashion to refer to processes and tests which fall within the contemporary medical field of "general pathology", an area which includes a number of distinct but inter-related medical specialties that diagnose disease, mostly through analysis of tissue, cell, and body fluid samples.
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,C02
	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.	CO1,CO2
	Unit 2	**Vascular disorder**	
	A	Hyperemia /Ischemia and Hemorrhage Edema: Pathogenesis and types. Chronic venous congestion: Lung , Systemic Pathology Thrombosis and Embolism: Formation, Fate and Effects. Infarction: Types, Common sites Shock: Pathogenesis, types, morphologic changes.	CO2
	B	**Growth Disturbances:** **1)** Atrophy, Hypertrophy, Hyperplasia, Aplasia, Hypoplasia, Metaplasia, Malformation, Agenesis, dysplasia. Precancerous lesions.	CO2
	C	**Genetic disorders:** Genetic Disorders–. Basic concepts of genetic disorders and some common examples and congenitalmalformation.	CO2, CO6
	Unit 3	**Hematology**	
	A	Nutritional anemia's,Acquired hemolytic anemias.	CO4, CO6
	B	Haemostatic disorders, Vascular and Platelet disorders& lab diagnosis.	CO4, CO6
	C	Coagulopathies,Leukocytic disorders,Leukemia,Blood transfusion	CO4, CO6
	Unit 4	**Neoplasia**	
	A	Neoplasia: Definition, classification, Biological behaviour: Benign and Malignant,Carcinoma and Sarcoma. Malignant Neoplasia: Grades and Stages, Local & Distant spread.	CO3

	B	Carcinogenesis:Environmentalcarcinogens,chemical,viral, occupational, Hereditynd cellularoncogenes and prevention of cancer.	CO3
	C	Benign & Malignant epithelial tumours Eg. Squamous papilloma, Squamous cell carcinoma, Malignant melanoma. Benign & Malignant mesenchymal tumours Eg: Fibroma, Lipoma, Neurofibroma, Fibrosarcoma,Liposarcoma, Rhabdo-myosarcoma, Teratoma.	CO3
	Unit 5	**Introduction, general features, pathogenicity, diagnosis, treatment and prevention**	
	A	Polio virus	CO5, CO6
	B	Hepatitis, Herpesvirus	CO5, CO6
	C	HIV	CO5, CO6

	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Text book of pathology by Harsh Mohan 2. Basic pathology by cotran Kumar Robbins			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	2	3	2
CO2	3	2	2	3	3	3	3	2	3	2	3	2	2	3
CO3	2	3	2	2	3	3	3	2	2	3	3	3	2	2
CO4	3	2	2	3	2	1	2	3	2	2	2	2	3	3
CO5	2	3	2	3	2	2	3	2	3	3	2	3	2	3
CO6	2	2	3	2	2	3	2	2	2	2	2	2	3	2
Average Pos	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2.5**

School: SSAHS	**Batch: 2023-2027**

Programme: BPT		**.**	
Branch:		**Semester:3rd**	
1	Course Code	PTB 232	
2	Course Title	Pharmacology (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	1.Introduce the students to basic pharmacology of various common medication used and its effects on patients in physical therapy 2.Treatment of ailment of cardiovascular system , GIT,endocrine system,by drugs 3. To make student understand the drug and physiotherapy contribution in the outcome of the treatment.	
6	Course Outcomes	CO1: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	CO1
	B	Routes of drug administration,Distribution of drugs,Metabolism and	CO1
		Excretion of drugs .	
	C	Pharmacokinetics,Pharmacodynamics, Factors modifying drug response, Adverse effects	CO1
	Unit 2	**AutonomicNervous system&Cardiovascular Pharmacology–**	

	A	General considerations- The Sympathetic and Parasympathetic Systems, Receptors, Somatic Nervous System Cholinergic and Anti-Cholinergic drugs, Adrenergic and Adrenergic blocking drugs, Peripheral muscle relaxants.	CO2
	B	Antiarrhythmic Drugs-Drugs used in the treatment of vascular disease and tissue ischemia	CO2
	C	Drugs used in the treatment of heart failure: Digitalis, Diuretics, Vasodilators, ACE inhibitors.Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors, Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators	CO2
	Unit 3	**Neuropharmacology & Disorders of Movement**	
	A	Sedative-Hypnotic Drugs: Barbiturates, BenzodiazepinesAntianxiety Drugs: Benzodiazepines, Other AnxiolyticsDrugsUsedinTreatmentofMoodDisorders:MonoamineOxidaseInhibitors,Tricyclic	CO2
	B	Antidepressants, Atypical Antidepressants, Lithium d. Antipsychotic drugs	CO2
	C	Drugsused in Treatment of Parkinson'sdisease AntiepilepticDrugs,Spasticity and Skeletal MuscleRelaxants	CO2
	Unit 4	**Inflammatory/ImmuneDiseases**	
	A	Non-narcoticAnalgesicsandNonsteroidalAnti-InflammatoryDrugs:Acetaminophen,NSAIDs, Aspirin, Nonaspirin NSAIDs, drug Interactwith NSAIDs	CO5
	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.	Co5,CO6
	Unit 5	**Digestion and Metabolism & Geriatrics-**	
	A	Gastrointestinal Pharmacology: Peptic Ulcer Disease, Constipation, Diarrhea	CO4
	B	Drugs Used in Treatment of Diabetes Mellitus: Insulin, Oral Hypoglycemic	CO4

	C	Pharmacology and the geriatric Population: Adverse effects of special concern in the Elderly, Dementia, Postural hypotension			C05
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	1	2	3	1	3	2	3	2
CO2	2	1	3	3	1	2	3	3	2	3	1	3	3	3
CO3	3	3	3	3	3	3	3	1	3	3	3	1	3	3
CO4	3	2	3	3	2	3	2	3	3	2	3	3	1	2
CO5	2	3	2	3	3	1	3	2	1	3	2	3	2	2
CO6	1	2	2	2	2	3	2	2	3	2	1	2	3	3
Average Pos	**2.33**	**2.33**	**2.66**	**2.83**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT .			
Branch:		**Semester:3rd**	
1	Course Code	PTB 233	
2	Course Title	Electrotherapy (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	The objective of this course is that the student will be able to list the indications and contraindications of various types of electrotherapeutic modalities, demonstrate the differenttechniques, and describe their effects	
6	Course Outcomes	CO1: Able to understand the various properties of elctrotherpay CO2: to demonstate 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. CO6: To formulate the applicability of modalities in different conditions.	
7	Course Description	In this course the student will learn the principles, technique, and effects of electrotherapy as atherapeutic modality in the restoration of physical function	
8	Outline syllabus		CO Mapping
	Unit 1	**Bioelectronics**	
	A	Electron theory, static and current electricity. Conductors, Insulators, Potential difference, Resistance & Intensity. Ohm's Law – Its application to AC & DC currents. Rectifying Devices – Thermionic Valves, Semiconductors, Transistors,Amplifiers, Transducers Oscillator circuits. Capacitance, condensers in DC and AC Circuits. Display devices & indicators – analogue & digital. Effects of Current Electricity:	CO1
	B	Chemical effects - Ions and electrolytes,Ionisation,Production of a E.M.F. by chemical actions. Magnetic effects, Molecular theory of Magnetism,Magnetic fields, Electromagnetic Induction, eddycurrents,Mili ammeter and Voltmeter, Transformers andChoke Coil	CO1

	C	Thermal Effects – Joule's Law and Heat production. Physical Principles of sound and its properties. Physical Principles of light and its properties, Electromagnetic spectrum – biophysical application, Laws of Transmission- reflection, refraction,absorption, attenuation			CO1
	Unit 2	**Low frequency current**			
	A	Physiological effects, therapeutic uses, indications and contraindications and dangers of faradic type current, intermittent galvanic current and galvanic current Electrical stimulation for re-education – short /long pulse motor points Strong surged faradic current under pressure/elevation. Electrical Reactions and Electro – diagnostic tests: Electrical Stimuli and normal behavior of Nerve and muscle tissue			CO2
	B	S.D. Curve and its application and characteristics Chronaxie, Rheobase& pulse ratio High voltage pulsed galvanic current			CO2
	C	TENS: indication and contraindications.			CO2
	Unit 3	**Medium frequency current**			
	A	Interferential therapy: Define, Principles of production, static Interferential system, dynamic interference system, dosage, electrode placement, Physiological and therapeutic effects, indication and contraindications.			CO2,CO3
	B	Russian currents			CO2,CO3
	C	Rebox type currents			CO2,CO3
	Unit 4	**Biofeedback method**			
	A	Biofeedback method: Instrumentation, principles, therapeutic effects, indications, contraindications, limitations, precautions.			CO3,CO4, CO6
	B	Electro – diagnosis – Instrumentation, definition & basic techniques of E.M.G.			CO3,CO4, CO6
	C	operational skills and patient preparation			CO3,CO4
	Unit 5	**Other electrotherapy modalities**			
	A	Therapeutic mechanical pressure (Intermittent compression therapy) – Principle, biophysical effects, types, therapeutic effects, indications, contraindications, precautions, operational skills and patient preparation.			CO5, CO6
	B	Iontophoresis : indication , contraindication, mechanism and its effects			CO5, CO6
	Mode of examination	Practical/Viva			
	Weight age	CA	MTE	ETE	
	Distribution	25%	-	75%	
	Text book/s*	Clayton's Electro Therapy 2 Electro therapy Explained – by Low &Reed 3 Electro Therapy – by Kahn			

		4 Therapeutic Electricity – by Sydney Litch	
	Other References	Clinical Electro Therapy – by Nelson & Currier	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	3	3	2	3	3	3	1	2	2	3	3	3
CO2	3	1	3	2	1	3	3	2	3	3	3	1	2	1
CO3	1	3	3	3	3	3	3	3	3	1	3	3	3	3
CO4	3	2	1	3	3	3	3	3	2	3	2	3	3	2
CO5	3	3	2	2	2	2	3	1	3	2	2	2	2	3
CO6	2	2	3	2	2	2	2	3	2	2	3	1	1	2
Average Pos	**2.33**	**2.33**	**2.5**	**2.5**	**2.16**	**2.66**	**2.83**	**2.5**	**2.33**	**2.16**	**2.5**	**2.16**	**2.33**	**2.33**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch:		**Semester:3rd**	
1	Course Code	PTB 234	
2	Course Title	Fundamentals of Biomechanics and Exercise Therapy (PR)	
3	Credits	4	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	1.Describe basic concepts of biomechanics and 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 applyrelaxation techniques, soft tissue manipulation CO5: Describe the various biomechanics properties of joint structure and thorax region CO6: To formulate the relation between biomechanics and exercise therapy to be applied on the subjects	
7	Course Description	At the end of the course, the candidate will have a better understanding of the principles ofexercise therapy and biomechanics both basic and advanced as well as assessment techniques. The student's skillwill be enhanced through hands on training provided during the practical hours.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to Exercise Therapy**	
	A	IntroductiontoExerciseTherapy-TheaimsofExerciseTherapy,ThetechniquesofExercise Therapy, Approach to patient's problems, Assessment of patient's condition	CO1
	B	Starting Positions–Fundamental positions & derived Positions	CO1, CO2
	C	Method of testing – goniometery, MMT. Measurement of Limb Length: true limb length, apparent limb length, seg mental limb length, Measurement of the angle of Pelvic Inclination	CO1, CO2
	Unit 2	**Relaxation therapy and soft tissue manipulation**	
	A	Methods &techniques of relaxation.	CO4
	B	Principles& uses: General, Local, Jacobson's ,Mitchel's, additional	CO4

		methods			
	C	Soft tissue manipulation : techniques			CO4
	Unit 3	**Basic Concepts in Biomechanics: Kinematics and Kinetics**			
	A	Types of Motion, Location of Motion, Direction of Motion, Magnitude of Motion, Definition of Forces			CO1, CO6
	B	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, CO6
	Unit 4	**Joint, muscle structure and function**			
	A	Joint design, Materials used in human joints			CO5, CO6
	B	Joint function, Joint motion, General effects of disease, injury and immobilization.			CO5, CO6
	C	Elements of muscle structure, Muscle function			CO5, CO6
	Unit 5	**Biomechanics of the Thorax and Chest wall**			
	A	General structure and function			CO5, CO6
	B	Rib cage and the muscles associated with the rib cage Ventilatory motions: its coordination and integration			CO5, CO6
	C	Developmental aspects of structure and function Changes in normal structure and function in relation to pregnancy, scoliosis and COPD			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	-	75%	
	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.			
	Other References	1) Biomechanical principles: Frenkel 2)Joint Structure &Functions :Norkins 3) Biomechanics and kinesology- Neuman			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3

CO1	3	1	3	2	3	2	3	3	1	2	3	3	3	3
CO2	2	3	3	3	1	3	1	2	3	3	2	1	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	1	2	3	3	2	3	2	3	3	2	3	3
CO5	1	3	2	2	2	3	3	1	3	2	2	3	2	3
CO6	3	2	3	3	1	2	2	3	2	2	1	2	2	2
Average Pos	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.66**	**2.83**

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

School: SSAHS	**Batch: 2023-2027**
Programme: BPT	**.**

Branch: Physiotherapy		3rd Semester	
1	Course Code	PTB 235	
2	Course Title	**Anthropometry (Practical)**	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	1. To educate the students about the concepts of Anthropometry 2.To educate the students about different body measurements 3. To develop understanding about the concept of age determination and body proportion 4. To develop understanding about the methods of Somatotyping	
6	Course Outcomes	CO1. Recalling about the concepts of Anthropometry CO2. Understand about different body measurements CO3: Understand about different body composition methods CO4. Understanding the concept of age determination and body proportion CO5. Applying the concept methods of Somatotyping CO6: Evaluate performance using principles of growth, maturation and performance	
7	Course Description	The course is designed to enable the students to have knowledge and understanding about role of anthropometry.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction to anthropometry**	
	A	Demonstration of basic concepts of anthropometry	CO1
	B	Demonstration ofPlanes and Axes of body	CO1
	C	Demonstration ofLandmarks on body	CO1
	Unit 2	**Body measurement**	
	A	Demonstration of measurement of Lengths or heights of body parts	CO2
	B	Demonstration of measurement of Circumferences of upper limb	CO2
	C	Demonstration of measurement of Circumferences of lower limb	CO2

	Unit 3	**Body composition-I**		
	A	Demonstration of measurement of skinfold thickness in upper limb		CO3
	B	Demonstration of measurement of skinfold thickness in lower limb		CO3
	C	Demonstration of measurement of skinfold thickness in back and abdomen		CO3
	Unit 4	**Age Determination and Body proportion**		
	A	Skeletal Age: Methods to estimate skeletal age		CO4
	B	Dental age		CO4
	C	Body proportion		CO4
	Unit 5	**Somatotyping**		
	A	Introduction to somatotyping: Classification		CO5, CO6
	B	Heath – Carter method of somatotyping		CO5, CO6
	C	Growth, maturation and physical performance		CO5, CO6
	Mode of examination	Theory		
	Weightage Distribution	CA	ESE	
		25	75	
	Text book/s*	1. Singh and Malhotra: Kinanthropometry, Lunar Publications 2. H.S. Sodhi: Sports Anthropometry (A Kinanthropometric Approach), Anova Publications 3. Verma and Mokha: Nutrition, Exercise and Weight Reduction,		
		Exercise Science Publication Society 4. Ostym, Beunen and Simons: Kinanthropometry II, University Park Press, Baltimore 5. James A.P. Day: Perspectives in Kinanthropometry, Human Kinetics Publishers, Inc. Champaign, Illinois		
	Other References	1.L.S. Sidhu Et. Al: Sports Sciences – Health, Fitness and Performance, IASSPE 2. L.S. Sidhu Et. Al: Trends in Sports Sciences, IASSPE		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3

CO1	3	1	3	3	3	2	3	3	1	2	3	3	3	2
CO2	2	3	1	2	1	3	2	1	3	3	3	3	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	2	3	3	3	3	2	2	3	3	3	1	2
CO5	1	3	3	1	2	3	2	3	3	2	2	3	2	2
CO6	3	2	2	3	1	2	1	2	2	2	2	2	3	3
Average Pos	**2.5**	**2.33**	**2.33**	**2.5**	**2.16**	**2.33**	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.5**

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

School: SSAHS	**Batch: 2023-2027**

Programme: BPT		**.**	
Branch: Physiotherapy		**III Semester**	
1.	Course Code	PTB 236	
2.	Course Title	Clinical Observation I	
3.	Hours/Week	6	
4.	Contact Hours (L-T-P)	0-0-3	
	Course Type	CC	
5	Course Objective	This course aims to study about the hospital settings and the basics of clinicals.	
6.	Course Outcomes	CO1-To make the student remember about the functions of hospital. CO2- To understand about the hospital setting and patient communication. CO3- To apply what they have learned about the hand hygiene, regarding the confidentiality of patient. CO4- To analyse when and where to use about above things in clinical setup CO5: To apply what they have learned about the hand hygiene, regarding the	
		confidentiality of patient. CO6: To design and formulate the necessary functions and clinical setup in hospital and clinical settings.	
7.	Course Description	This course is to teach the students the basic elements of hospital, make them aware with the basic medical terminologies and about the patient's confidentiality.	
8.	Outline Syllabus		CO Mapping
	Unit 1	**Introduction to the Hospital**	
	A	Introduction to Hospital set-up	CO1, CO2
	B	Functions of Hospital	CO2, CO3, CO5
	C	Introduction to Physiotherapy OPD	CO4
	Unit 2	**Communication**	
	A	To maintain good interpersonal relationship	CO3
	B	Patient to therapist	CO2, CO3
	C	Therapist to peer, other doctors	CO2, CO3
	Unit 3	**Confidentiality**	
	A	Autonomy	CO4, CO3, CO2, CO6
	B	Privacy	CO2, CO3,CO4, CO6
		Promise keeping and Utility	C03, CO4, CO6
	Unit 4	**Universal Precautions**	
	A	Medical hand hygiene practices	CO1, CO2, CO3, CO4
	B	Suction Hygiene	CO1, CO2, CO3, CO4, CO6

	C	Vaccination		CO1, CO2, CO3, CO4, CO6
	Unit 5	**Medical Terminologies**		
	A	Components and process of human body		CO3, CO4, CO5, CO6
	B	Medical procedures, diseases, disorders		CO3, CO4, CO5, CO6
	C	Pharmacology		CO3, CO4, CO5, CO6
	Mode of Examination			
	Weightage Distribution	CA	ETE	
		100		
	Textbook/s*			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	1	2	3	3	3	3	3	1	3	2	3	2
CO2	3	3	3	3	1	2	2	1	2	3	1	3	3	3
CO3	3	3	3	1	3	3	3	3	3	3	3	1	3	3
CO4	3	3	2	3	2	3	3	2	3	2	3	3	1	2
CO5	2	3	3	2	3	1	2	3	1	3	2	3	2	2
CO6	2	2	2	2	2	3	1	2	3	2	1	2	3	3
Average Pos	**2.66**	**2.83**	**2.33**	**2.16**	**2.33**	**2.5**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

Fourth Semester

School:	**Batch: 2023-2027**

SSAHS			
Programme: BPT		.	
Branch: BPT		**Semester:4th**	
1	Course Code	PTB 211	
2	Course Title	EXERCISE THERAPY	
3	Credits	3	
4	Contact Hours (L-T-P)	3-0-0	
	Course Type	CC	
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 understand& describe advanced therapeutic exercises CO2:To be able to perform various types of stretching of upper limb & lower limb, strengthening and use of walking aids. CO3: To know the benefits of hydrotherapy,balance and coordination exercise. CO4: To acquire the skills of application of manual therapy to improve to regain maximum strength of muscles, its therapeutic uses and merits-demerits of the same. CO5. To describe various techniques hydrotherapy, suspension therapy. CO6: To formulate the various exercise Programme with required measures.	
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	**Introduction to exercise therapy**	
	A	Specific exercise regimens	CO1
	B	Proprioceptive NeuromuscularFacilitation	CO1
	C	Functional Re-education	CO1
	Unit 2	**Various forms of exercise**	
	A	Aerobic Exercise	CO2
	B	Stretching and strengthening	CO2
	C	Walking aids	CO2
	Unit 3	**Balance and posture**	
	A	Balance	CO3, CO6
	B	Co-ordinationExercise	CO3,

					CO6
	C	Posture			CO3 , CO6
	Unit 4	**Manual therapy**			
	A	Manual Therapy &Peripheral JointMobilization			CO4 , CO6
	B	Basics in Manual Therapy &Applications with clinical reasoning			CO4 , CO6
	C	.Maitland,mulligan,Mckenzie,MuscleEnergyTechnique,Myofascialstretching,CyriaxNeuro Dynamic Testing			CO4 , CO6
	Unit 5	**Other techniques**			
	A	Hydrotherapy			CO5 , CO6
	B	Individual and GroupExercises			CO5 , CO6
	C	Suspension therapy			CO5 , CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	3	2	1	2	3	3	3	1	3	2	3	3
CO2	1	2	3	3	3	3	3	3	2	3	1	3	2	1
CO3	3	3	3	3	3	1	3	3	3	3	3	1	3	3
CO4	2	3	1	2	2	3	3	3	3	2	3	3	3	2
CO5	3	1	2	2	3	2	2	3	1	3	2	3	2	3
CO6	2	3	3	3	2	2	2	2	3	2	1	2	1	2
Average Pos	**2.33**	**2.5**	**2.5**	**2.5**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: SSAHS		**Semester:4th**	
1	Course Code	PTB 212	
2	Course Title	Thermotherapy and Actinotherapy	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	DSC	
5	Course Objective	The objective of this course is that the student will be able to list the indications and contraindications of various types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects.	
6	Course Outcomes	CO1: Able to Understand the use of superficial heating 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 for different type of modalitites CO6: To demonstrate the formulate the applicability of various modalities.	
7	Course Description	In this course the student will learn the principles, technique, and effects of thermotherapy and actinotherapy as atherapeutic modality in the restoration of physical function.	
8	Outline syllabus		CO Mapping
	Unit 1	**SUPERFICIAL HEATING MODALITIES**	
	A	Wax Therapy, Contrast Bath, Moist Heat Therapy Method of Application ,Therapeutic Uses, Indications and Contraindications.	CO1,CO 2
	B	Fluidotherapy, WhirlPool Bath Method of Application, Therapeutic Uses, Indications & Contraindications	CO1,CO 2
	C	Cryotherapy: Principle, Physiological Therapeutics effects, Techniques of Applications, Indications& Contraindications, Dangers, and Methods of application with dosages.	CO1,CO 2
	Unit 2	**UVR and IRR**	
	A	Ultra – violet rays (UVR): Wavelength, frequency, types & sources of UVR generation, techniques of irradiation, physiological& therapeutic effects, indications, contraindications, precautions, Dosimetry of UVR.	CO2,CO 3
	B	Infra red rays – Wavelength, frequency, types & sources of IRR generation, techniques of irradiation, physiological & therapeutic effects, indications, contraindications, precautions	CO2,CO 3

	C	operational skills of equipment & patient preparation.			CO2,CO 3
	Unit 3	**LASER**			
	A	Light Amplification of stimulated Emission of Radiation (LASER)– Definition, historical background, physical Principles. precautions, operational skills and patient preparation			CO3, CO4, CO6
	B	biophysical effects, types, production, therapeutic Effects, techniques of application, indications, contraindications.			CO3, CO4, CO6
	C	precautions, operational skil\ls and patient preparation			CO3, CO4, CO6
	Unit 4	**HIGH FREQUENCY CURRENTS**			
	A	Physiological responses to heat gain or loss onvarious tissues of the body. Therapeutic effects of heat, cold, Physical principles of Electro – magnetic radiation. , Physics of sound including characteristics andpropagation			CO3, CO4, CO6
	B	High frequency currents (S.W.D.) Production, biophysical effects, types, therapeutic effects, techniques of application,indications, contraindications, precautions, operational skills and patient preparation.			CO3, CO4, CO6
	C	High frequency sound waves (Ultrasound): Production, biophysical effects, types, therapeutic effects, techniques of application, indications, contraindications,			CO3, CO4, CO6
		Precautions ,operational skills and patient preparation.			
,	**Unit 5**	**Combination Therapy**			
	A	US + TENS			CO4, CO5, CO6
	B	US+ electrical stimulation therapy			CO4, CO5, CO6
	C	Recent advances for combination therapy			CO4, CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Clayton"s Electro Therapy, CBS Publishers & Distributors 2. Low & Read, Electro therapy Explained ,Butterworth-Heinemann Limited, 2000			
	Other References	1. Therapeutic heat and cold by Lehmann. 2. Principle and practice of Electrotherapy by Joseph Kahn. 3. Electrotherapy: Clinics in physical therapy- Wolf.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	2	3	2	3	3	1	2	3	3	3	3
CO2	2	3	3	3	1	3	1	2	3	3	2	1	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	1	2	3	3	2	3	2	3	3	2	3	3
CO5	1	3	2	2	2	3	3	1	3	2	2	3	2	3
CO6	3	2	3	3	1	2	2	3	2	2	1	2	2	2
Average Pos	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: BPT		**Semester:4th**	
1	Course Code	PTB 213	
2	Course Title	MEDICAL PHYSIOTHERAPY LAW & ETHICS	
3	Credits	2	
4	Contact	2-0-0	
	Hours (L-T-P)		
	Course Type	CC	
5	Course Objective	To know about evolution of Physiotherapy, identify various laws and regulation that should be followed during clinical practice of Physical Therapy.	
6	Course Outcomes	CO1: On completion of the course the students should be able to know the medical law and ethics CO2:Able to know the legal and illegal issues faced in hospital CO3: The students should understand the code of ethics for physiotherapist CO4: They will be able to treat patient more lawfully in clinical and hospital setting and maintain their records. CO5: Understand the importance of Ethics in the relative field & basic concepts of Ethics. CO6: To formulate treatment and assessment keeping the ethical and medical law under considerations.	
7	Course Description	The students will enable to know about evolution of Physiotherapy, identify various laws and regulation that should be followed during clinical practice of Physical Therapy.	
8	Outline syllabus		CO Mapping
	Unit 1	**Medical ethics versus medical law**	
	A	Introduction to Code of conduct	CO1,CO2
	B	Basic principles of medical ethics–Confidentiality	CO1,CO2
	C	Malpractice and negligence-Rational and irrational drug therapy	CO1,CO2
	Unit 2	**Autonomy and informed consent-Right of patients**	
	A	Care of the terminally ill-Euthanasia	CO2,CO3
	B	Organ transplantation	CO2,CO3
	C	Medical diagnosis versus physiotherapy diagnosis	CO2,CO3
	Unit 3	**Medicolegal Aspects of Medical Records**	
	A	Medico legal case and type-Records and document related to MLC- ownership of medical records-	CO3, CO6
	B	Confidentiality Privilege communication	CO3, CO6
	C	Release of medical information- Unauthorized disclosure- retention of medical records- other various aspects.	CO3, CO6

	Unit 4	**Professional Indemnity insurance policy**			
	A	Development of standardized protocol to avoid near miss or sentinel events			CO4, CO6
	B	Obtaining an informed consent			CO4, CO6
	C	Biomedical ethical principles			CO4, CO6
	Unit 5	**Code of ethics**			
	A	Code of ethics for physiotherapists			CO5, CO6
	B	Ethics documents for physiotherapists			CO5, CO6
	C	Laws affecting physiotherapy practice			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*				
	Other References				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	3	1	3	3	3	2	1	2	3	3
CO2	1	3	2	1	2	3	3	3	3	3	3	3	1	2
CO3	3	1	3	3	3	3	3	3	3	3	3	1	3	3
CO4	3	3	3	2	3	2	3	3	1	2	2	3	2	3
CO5	2	3	2	3	1	3	2	3	2	2	3	2	3	1
CO6	1	2	1	2	3	2	2	2	3	3	2	2	2	3
Average Pos	**2.16**	**2.33**	**2.33**	**2.33**	**2.5**	**2.33**	**2.66**	**2.83**	**2.5**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT .			
Branch: Physiotherapy		**Semester: IV**	
1	Course Code	PTB 214	
2	Course Title	**ERGONOMICS**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	DSC	
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	CO1: To understand concept of ergonomics CO2: To understand the posture and body mechanics CO3: To demonstrate an understanding for designing the equipments and workplace. CO4: To understand the assessment of various work-related musculoskeletal conditions CO5: To understand the rehabilitation of various work-related musculoskeletal conditions. CO6: To design the lifestyle modifications for better ergonomics.	
7	Course Description	Subject follows the basic science to provide the knowledge about ergonomics and conditions the therapist would encounter due to workplace stress and injuries.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
	A	Focus of ergonomics, Ergonomics and its areas of application in the work system	CO1, CO2
	B	Brief history of ergonomics, Modern ergonomics	CO3, CO4
	C	Attempts to 'humanise' work, Effectiveness and cost effectiveness, Future directions for ergonomics	CO4, CO5
	Unit 2	**Posture and body mechanics**	
	A	Basic body mechanics, Postural stability and postural adaptation	CO2, CO4, CO6
	B	Risk factors for musculoskeletal disorders in the workplace, Behavioural aspects of posture	CO3, CO5, CO6
	C	Work capacity, stress and fatigue	CO4,

					CO5, CO6
	Unit 3	**Designing equipment, static work, and repetitive task.**			
	A	Anthropometrics principles in workplace and its uses in erganomics			CO1, CO2, CO6
	B	Fundamental aspects of standing and sitting, design for standing workers and sitting workers, Ergonomics approach to workstation design, workspace and visual units			CO3, CO4, CO6
	C	Design for manual handling tasks, carrying.			CO4, CO5, CO6
	Unit 4	**Work place related Musculoskeletal disorders**			
	A	Upper back			CO2, CO4, CO6
	B	Lower back			CO3, CO5, CO6
	C	Upper limb and lower limb.			CO4, CO5, CO6
	Unit 5	**Assessment and rehabilitation.**			
	A	Musculoskeletal Assessment			CO1, CO4, CO6
	B	Rehabilitation			CO2,CO5 , CO6
	C	Modifications			CO1, CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Introduction to Ergonomics, R. S. Bridger			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3		3	3	2		3	3	1	3	2	1	2
CO2	2		1	2	3		3	3	2	3	1	3		3
CO3	3	3	3		3	3	3	3	3		3	1	3	1
CO4		2	2	3	1	2	3		3	2		3	2	3
CO5	2	3	3	1	2	2	2	3	1	3	2		3	2
CO6	1	2	2	3	3	3	2	2		2	1	2	2	
Average Pos	**2.2**	**2.6**	**2.2**	**2.4**	**2.5**	**2.4**	**2.6**	**2.8**	**2.4**	**2.2**	**2**	**2.2**	**2.2**	**2.2**

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

Formatted Table

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT.			
Branch: SSAHS		**Semester:4th**	
1	Course Code	PTB 215	
2	Course Title	MICROBIOLOGY	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	CC	
5	Course Objective	The student will be able to 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 introduction of microbiology CO2: to understand the immunological reaction and Acquire knowledge of	
		common immunological disorders and their resultant effects on the human body CO3:Acquire the knowledge of concepts sterilization and disinfection CO4: to understand the concept of laboratory diagnosis of infection CO5: Understand in brief, about the general classification of micro oragnism and applied microbiology CO6: To create the possible analysis and mechanisms involved in the microbial diversity and lab diagnosis.	
7	Course Description	The course is designed to develop the basic knowledge about the concept of injury, its healing process and its resultant effects on the human body. Microbiology involves the study of common organisms causing diseases including nosocomial infections and precautionary measures to protect one from acquiring infections. The knowledge and understanding Microbiology of diseases is essential to institute appropriate treatment or suggest preventive measures to the patient. Particular effort is made in this course to avoid burdening the student.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction of Microbiology and Immunology:**	
	A	1)Medical terminologies , Importance and applications of medical microbiology 2) Sterilization 3) Antiseptic and disinfection	CO1

	B	**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
	C	Hypersensitivity & auto-immunity - Definition, Classification Anaphylaxis – mechanism, manifestations & tests for Anaphylaxis, definitions of autoimmunity, Classification& Mechanism.	CO1, CO6
	Unit 2	**Sterilization & disinfection**	
	A	Definition of Sterilization, Disinfection, Enumeration of physical methods of sterilization including principles and their Applications, commonly used Disinfectants.	CO2, CO3, CO6
	B	Hospital Acquired Infection Must know – Definition, factor influencing infection, mode of transmission &prevention of MAI.	CO2, CO3, CO6
	C	Universal safety precautions, definition of waste classification, segregation Transport & disposal	CO2, CO3, CO6
	Unit 3	**Laboratory diagnosis of Infection**	
	A	Host parasite relationship & bacterial infections. – Different sources and modes of transmission ofinfection,	CO4, CO6
		microbial factors leading to establishment of infection.	
	B	Methods of identification of bacteria - – Principle of laboratory diagnosis of infectious diseases, General procedure for collection	CO4, CO6
	C	Diagnosis of infectious diseases. Transport and processing of specimen forMicrobial diagnosis.	CO4, CO6
	Unit 4	**General classification of microorganisms &characteristics**	
	A	**Bacteriology:** 2)Classification of bacteria & characteristics	CO5
	B	**Systemic bacteriology: Introduction, general features, pathogenicity, diagnosis, treatment and prevention** Mycobacterium tuberculosis, Mycobacterium leprae COVID	**CO5**
	C	SARS SWINE Flu Ebola	**CO5**
	Unit 5	**Introduction, general features diagnosis, treatment and prevention**	**CO5, CO6**
	A	1. Polio virus 2. Hepatitis 3. Herpesvirus	CO5, CO6

		4. HIV			
	C	**Applied Microbiology** 1)Hospital acquired infection 2)Central nervous System infections 3)Meningitis			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	25%	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 & amp; C.K.JayramPanikar 2. Textbook of Microbiology-C.P.Baweja, Arya publications Essential of Medical Microbiology – Apurba S Sastry&SandhyaBhat, JAYPEE publication			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	1	2	3	1	3	2	3	2
CO2	2	1	3	3	1	2	3	3	2	3	1	3	3	3
CO3	3	3	3	3	3	3	3	1	3	3	3	1	3	3
CO4	3	2	3	3	2	3	2	3	3	2	3	3	1	2
O5	2	3	2	3	3	1	3	2	1	3	2	3	2	2
CO6	1	2	2	2	2	3	2	2	3	2	1	2	3	3
Average Pos	**2.33**	**2.33**	**2.66**	**2.83**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

School: SSAHS Programme: BPT		**Batch: 2023-27**	
		4th Semester	
1.	Course Code	PTB 216	
2.	Course Title	Quality Assurance in Clinics	
3.	Credits	2	
4.	Contact Hours (L-T-P)	2-0-0	
	Course Type	DSC	
5	Course Objective	This course aims to study about the Quality Assurance in Clinical setting.	
6.	Course Outcomes	CO1: To make them remember about the Quality assurance in hospitals. CO2-: To make them understand about the importance of medical records and about the health care evaluation. CO3: To apply what they have learned about the quality assurance system CO4: To analyse when and where to use about above things in clinical setup CO5: To appraise the qualitative aspects of clinical practice in different settings. CO6: to design quality process flow and SOPs for physiotherapy clinics	
7.	Course Description	This course is to teach the students about the quality assurance in clinical settings	
8.	Outline Syllabus		CO Mapping
	Unit 1	**Introduction to Quality Assurance**	
	A	Define Quality Assurance	CO1, CO2
	B	Quality requirements	CO2, CO3
	C	Types of Quality System	CO4
	Unit 2	**Quality of Medical Record Content**	
	A	Quality training in departments	CO3
	B	Assessment Record	CO2, CO3
	C	Progress sheets	CO2, CO3
	Unit 3	**Health Care Evaluation**	
	A	To promote effective and efficient use of avail-able health facilities	CO4, CO3, CO2
	B	To identify and analyse patterns of patient care	CO2, CO3,CO4
		Appropriateness of medical care for most frequent diagnosis	C03, CO4
	Unit 4	**Credentials**	
	A	evaluation of the physician's Curriculum Vitae,	CO1, CO2, CO3, CO4
	B	Results of all Quality Assurance activities	CO1, CO2, CO3, CO4
	C	copies of current licenses	CO1, CO2, CO3, CO4
	Unit 5	**Annual Review**	
	A	Revision on annual basis	CO1, CO2, CO3, CO4

	B	Evidence of review			CO1, CO2, CO3, CO4
	C	Documentation of changes			CO1, CO2, CO3, CO4
	Mode of Examination	Theory			
	Weightage Distribution	MTE	CA	ETE	
		25%	25%	50%	
	Textbook/s*				

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	1	2	3	1	3	2	3	2
CO2	2	1	3	3	1	2	3	3	2	3	1	3	3	3
CO3	3	3	3	3	3	3	3	1	3	3	3	1	3	3
CO4	3	2	3	3	2	3	2	3	3	2	3	3	1	2
CO5	2	3	2	3	3	1	3	2	1	3	2	3	2	2
CO6	1	2	2	2	2	3	2	2	3	2	1	2	3	3
Average Pos	**2.33**	**2.33**	**2.66**	**2.83**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

Practical

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: SSAHS		**Semester:4th**	
1	Course Code	PTB 241	
2	Course Title	EXERCISE THERAPY (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
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 understand& describe advanced therapeutic exercises CO2:To be able to perform various types of stretching of upper limb & lower limb, strengthening and use of walking aids. CO3: To know the benefits of hydrotherapy, balance and coordination exercise. CO4: To acquire the skills of application of manual therapy to improve to regain maximum strength of muscles, its therapeutic uses and merits-demerits of the same. CO5. To demonstrate various techniques hydrotherapy, suspension therapy. CO6: To formulate the various exercise Programme with required measures.	
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	**Introduction to exercise therapy**	
	A	Specific exercise regimens	CO1
	B	Proprioceptive Neuromuscular Facilitation : UPPER LIMB, LOWER LIMB, TRUNK	CO1
	C	Functional Re-education	CO1
	Unit 2	**Various forms of exercise**	
	A	Aerobic Exercise	CO2
	B	Stretching and strengthening	CO2
	C	Walking aids : types and uses	CO2
	Unit 3	**Balance and posture**	
	A	Balance : tests	CO3, CO6
	B	Co-ordination Exercise : equilibrium and non equilibrium test	CO3, CO6

	C	Posture			CO3, CO6
	Unit 4	**Manual therapy**			
	A	Manual Therapy &Peripheral Joint Mobilization			CO4, CO6
	B	Basics in Manual Therapy &Applications with clinical reasoning			CO4, CO6
	C	.Maitland, mulligan, Mckenzie, MuscleEnergyTechnique, Myofascialst retching,CyriaxNeuro Dynamic Testing			CO4, CO6
	Unit 5	**Other techniques**			
	A	Hydrotherapy			CO5, CO6
	B	Individual and Group Exercises			CO5, CO6
	C	Suspension therapy			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	-	75%	
	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 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. Margarett Hollis, Massage for therapist: Margarett Hollis			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	1	2	3	3	3	1	3	2	3	3
CO2	1	2	3	3	3	3	3	3	2	3	1	3	2	1
CO3	3	3	3	3	3	1	3	3	3	3	3	1	3	3
CO4	2	3	1	2	2	3	3	3	3	2	3	3	3	2
CO5	3	1	2	2	3	2	2	3	1	3	2	3	2	3
CO6	2	3	3	3	2	2	2	2	3	2	1	2	1	2
Average Pos	**2.33**	**2.5**	**2.5**	**2.5**	**2.33**	**2.16**	**2.66**	**2.83**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: BPT		**Semester:4th**	
1	Course Code	PTB 242	
2	Course Title	Thermotherapy and Actinotherapy (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	The objective of this course is that the student will be able to list the indications and contraindications of various types of electrotherapeutic modalities, demonstrate the different techniques, and describe their effects.	
6	Course Outcomes	CO1: Able to Understand the use of superficial heating 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 for different type of modalitites CO6: To demonstrate the formulate the applicability of various modalities.	
7	Course Description	In this course the student will learn the principles, technique, and effects of thermotherapy and actinotherapy as atherapeutic modality in the restoration of physical function.	
8	Outline syllabus		CO Mapping
	Unit 1	**SUPERFICIAL HEATING MODALITIES**	
	A	Wax Therapy, Contrast Bath, Moist Heat Therapy Method of Application, Therapeutic Uses, Indications & Contraindications.	CO1, CO2
	B	Fluidotherapy, WhirlPool Bath Method of Application, Therapeutic Uses, Indications & Contraindications	CO1, CO2
	C	Cryotherapy: Principle, Physiological Therapeutics effects, Techniques of Applications, Indications& Contraindications, Dangers, and Methods of application with dosages.	CO1, CO2, CO6
	Unit 2	**UVR and IRR**	
	A	Ultra – violet rays (UVR): Wavelength, frequency, types & sources of UVRgeneration, techniques of irradiation, physiological& therapeutic effects, indications, contraindications,precautions, Dosimetry of UVR.	CO2, CO3

	B	Infra red rays – Wavelength, frequency, types & sources of IRR generation, techniques of irradiation, physiological & therapeutic effects, indications, contraindications, precautions			CO2, CO3, CO6
	C	operational skills of equipment & patient preparation.			CO2, CO3, CO6
	Unit 3	**LASER**			
	A	Light Amplification of stimulated Emission of Radiation (LASER)– Definition, historical background, physical Principles. precautions, operational skills and patient preparation			CO3, CO4, CO6
	B	biophysical effects, types, production, therapeutic Effects, techniques of application, indications, contraindications.			CO3,CO4, CO6
	C	precautions, operational skills and patient preparation			CO3, CO4, CO6
	Unit 4	**HIGH FREQUENCY CURRENTS**			
	A	Physiological responses to heat gain or loss onvarious tissues of the body. Therapeutic effects of heat, cold, Physical principles of Electro – magnetic radiation. , Physics of sound including characteristics andpropagation			CO3, CO4, CO6
	B	High frequency currents (S.W.D.) Production, biophysical effects, types,therapeutic effects, techniques of application,indications, contraindications, precautions,operational skills and patient preparation.			CO3, CO4, CO6
	C	High frequency sound waves (Ultrasound): Production, biophysical effects, types, therapeutic effects, techniques of application, indications, contraindications, precautions,operational skills and patient preparation.			CO3, CO4, CO6
,	**Unit 5**	**Combination Therapy**			
	A	US + TENS			CO4,CO5
	B	US+ electrical stimulation therapy			CO4,CO5
	C	Recent advances for combination therapy			CO4,CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	-	75%	
	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	PSO1	PSO2	PSO3
CO1	3	1	3	2	3	2	3	3	1	2	3	3	3	3
CO2	2	3	3	3	1	3	1	2	3	3	2	1	3	3
CO3	3	3	3	3	3	1	3	3	3	1	3	3	3	3
CO4	3	2	1	2	3	3	2	3	2	3	3	2	3	3
CO5	1	3	2	2	2	3	3	1	3	2	2	3	2	3
CO6	3	2	3	3	1	2	2	3	2	2	1	2	2	2
Average Pos	**2.5**	**2.33**	**2.5**	**2.5**	**2.16**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.33**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: IV**	
1	Course Code	**PTB 243**	
2	Course Title	**ERGONOMICS (PR)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	CC	
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	CO1: To demonstrate concept of ergonomics CO2: To demonstrate the posture and body mechanics CO3: To demonstrate an understanding for designing the equipments and workplace. CO4: To demonstrate the assessment of various workrelated musculoskeletal conditions CO5:To demonstrate the rehabilitation of various work related musculoskeletal conditions CO6: To design the lifestyle modifications for better ergonomics.	
7	Course Description	Subject follows the basic science to provide the knowledge about ergonomics and conditions the therapist would encounter due to workplace stress and injuries.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
	A	Focus of ergonomics, Ergonomics and its areas of application in the work system	CO1, CO2
	B	Brief history of ergonomics, Modern ergonomics	CO3, CO4
	C	Attempts to 'humanise' work, Effectiveness and cost effectiveness, Future directions for ergonomics	CO4, CO5
	Unit 2	**Posture and body mechanics**	
	A	Basic body mechanics, Postural stability and postural adaptation	CO2, CO4
	B	Risk factors for musculoskeletal disorders in the workplace, Behavioural aspects of posture	CO3, CO5, CO6
	C	Work capacity, stress and fatigue	CO4, CO5
	Unit 3	**Designing equipment, static work, and repetitive task.**	

	A	Anthropometrics principles in workplace and its uses in erganomics			CO1, CO2, CO6
	B	Fundamental aspects of standing and sitting, design for standing workers and sitting workers, Ergonomics approach to workstation design, workspace and visual units			CO3, CO4, CO6
	C	Design for manual handling tasks, carrying.			CO4, CO5, CO6
	Unit 4	**Work place related Musculoskeletal disorders**			
	A	Upper back			CO2, CO4, CO6
	B	Lower back			CO3, CO5, CO6
	C	Upper limb and lower limb.			CO4, CO5, CO6
	Unit 5	**Assessment and rehabilitation.**			
	A	Musculoskeletal Assessment			CO1, CO4
	B	Rehabilitation			CO2,CO5, CO6
	C	Modifications			CO1, CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	2. Introduction to Ergonomics, R. S. Bridger			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	3	1	1	2	3	3	3	2	3	3
CO2	1	3	3	3	2	3	3	3	1	2	3	3	2	1
CO3	3	1	3	3	3	3	3	1	3	3	3	3	3	3
CO4	3	3	3	3	3	2	2	3	2	3	1	2	3	2
CO5	2	3	2	3	1	3	3	2	3	1	2	2	2	3
CO6	1	2	2	2	3	2	2	2	2	3	3	3	1	2
Average Pos	**2.16**	**2.33**	**2.66**	**2.83**	**2.5**	**2.33**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**	**2.5**	**2.33**	**2.33**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: BPT		**Semester:4th**	
1	Course Code	PTB 244	
2	Course Title	MICROBIOLOGY (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	The student will be able toUnderstand 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 introduction of microbiology CO2: to understand the immunological reaction andAcquire knowledge of common immunological disorders and their resultant effects on the human body CO3:Acquire the knowledge of concepts sterilization and disinfection CO4: to understand the concept of laboratory diagnosis of infection CO5: Understand in brief, about the general classification of microoragnism and applied microbiology CO6: To create the possible analysis and mechanisms involved in the microbial assortment and management.	
7	Course Description	The course is designed to develop the basic knowledge about the concept of injury, its healing process and its resultant effects on the human body. Microbiology involves the study of common organisms causing diseases including nosocomial infections and precautionary measures to protect one from acquiring infections. The knowledge and understanding Microbiology of diseases is essential to institute appropriate treatment or suggest preventive measures to the patient. Particular effort is made in this course to avoid burdening the student.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction of Microbiology and Immunology:**	
	A	Medical terminologies , Importance and applications of medical microbiology Sterilization Antiseptic and disinfection	CO1

	B	**Immune system** Organ and cells involved in immune response Antigen Immunoglobulins (antibody) Antigen – antibody reaction Innate and acquired immunity Hypersensitivity Immunity (vaccines)	CO1
	C	Hypersensitivity & auto-immunity - Definition, Classification Anaphylaxis – mechanism, manifestations & tests for Anaphylaxis, definitions of	CO1
		autoimmunity, Classification& Mechanism.	
	Unit 2	**Sterilization & disinfection**	
	A	Definition of Sterilization, Disinfection, Enumeration of physical methods of sterilization including principles and their Applications, commonly used Disinfectants.	CO2, CO3, CO6
	B	Hospital Acquired Infection Must know – Definition, factor influencing infection, mode of transmission &prevention of MAI.	CO2, CO3
	C	Universal safety precautions, definition of waste classification, segregation Transport & disposal	CO2, CO3
	Unit 3	**Laboratory diagnosis of Infection**	
	A	Host parasite relationship & bacterial infections. – Different sources and modes of transmission ofinfection, microbial factors leading to establishment of infection.	CO4, CO6
	B	Methods of identification of bacteria - – Principle of laboratory diagnosis of infectious diseases, General procedure for collection	CO4, CO6
	C	Diagnosis of infectious diseases. Transport and processing of specimen forMicrobial diagnosis.	CO4, CO6
	Unit 4	**General classification of microorganisms &characteristics**	
	A	Bcteriologya: Classification of bacteria & characteristics	CO5, CO6
	B	**Systemic bacteriology**Mycobacterium tuberculosis, Mycobacterium leprae COVID	**CO5, CO6**
	C	SARS SWINE Flu Ebola	**CO5, CO6**
	Unit 5	**Introduction, general features diagnosis, treatment and prevention**	**CO5, CO6**
	A	Polio virus Hepatitis Herpesvirus	CO5, CO6

		HIV			
	C	Applied Microbiology Hospital acquired infection Central nervous System infections Meningitis			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	1	2	3	1	3	2	3	2
CO2	2	1	3	3	1	2	3	3	2	3	1	3	3	3
CO3	3	3	3	3	3	3	3	1	3	3	3	1	3	3
CO4	3	2	3	3	2	3	2	3	3	2	3	3	1	2
CO5	2	3	2	3	3	1	3	2	1	3	2	3	2	2
CO6	1	2	2	2	2	3	2	2	3	2	1	2	3	3
Average Pos	**2.33**	**2.33**	**2.66**	**2.83**	**2.33**	**2.5**	**2.33**	**2.16**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		Batch: 2023-2027	
Programme: BPT		**.**	
Branch: Physiotherapy		**4th Semester**	
1.	Course Code	PTB 245	
2.	Course Title	Clinical Observation II	
3.	Hours/Week	6	
4.	Contact Hours (L-T-P)	0-0-3	
	Course Type	CC	
5	Course Objective	This course aims to study about the physiotherapy functioning in OPD and IPD.	
6.	Course Outcomes	CO1-To make the student remember about the biomedical waste management and about the physiotherapy opd setup. CO2- To understand about the functioning of modalities and manual therapy. CO3- To apply what they have learned about the techniques and modalities CO4: To analyse when and where to use about above things in clinical setup. CO5: to judge emergency situations based on observational findings. CO6: To compile the observational findings for development and planning of further assessment.	
7.	Course Description	This course is to teach the students the basic elements of hospital, make them aware with the basic medical terminologies and about the patient's confidentiality.	
8.	Outline Syllabus		CO Mapping
	Unit 1	**Biomedical Waste Management**	
	A	Different kinds of medical waste	CO1, CO2
	B	Colour coding of biomedical waste	CO2, CO3
	C	3 R of waste management	CO4
	Unit 2	**Equipment Functioning**	
	A	Types of Modalities used	CO3
	B	Indications	CO2, CO3
	C	Contraindications	CO2, CO3
	Unit 3	**Manual Therapy**	
	A	Techniques used in various deformities	CO4, CO3, CO2
	B	Indication	CO2, CO3,CO4, CO6
		Contraindication	C03, CO4, CO6
	Unit 4	**Hospital Documentation**	
	A	Physiotherapy Progress Notes	CO2, CO3, CO4, CO6
	B	Assessment of Different conditions	CO2, CO3, CO4, CO6

	C	Dos and Don'ts			CO2, CO3, CO4, CO6
	Unit 5	**OPD Management**			
	A	Patient management in opd			CO1, CO2, CO3, CO4
	B	Biomedical Functioning for modalities			CO2, CO3, CO4, CO6
	C	Handover of duties			CO2, CO3, CO4, CO6
	Mode of Examination	Practical			
	Weightage Distribution	CA	MSE	ETE	
		25	25	50	
	Textbook/s*				

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3
CO1	3	3	1	2	3	3	3	3	3	1	3	2	3	2
CO2	3	3	3	3	1	2	2	1	2	3	1	3	3	3
CO3	3	3	3	1	3	3	3	3	3	3	3	1	3	3
CO4	3	3	2	3	2	3	3	2	3	2	3	3	1	2
CO5	2	3	3	2	3	1	2	3	1	3	2	3	2	2
CO6	2	2	2	2	2	3	1	2	3	2	1	2	3	3
Averag e Pos	**2.66**	**2.83**	**2.33**	**2.16**	**2.33**	**2.5**	**2.33**	**2.33**	**2.5**	**2.33**	**2.16**	**2.33**	**2.5**	**2.5**

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

Fifth Semester

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 301	
2	CourseTitle	General Medicine including endocrinology, Paediatrics and Geriatrics (theory)	
3	Credits	2	
4	Contact Hours (L)	2-0-0	
5	CourseType	CC	
6	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.	
7	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 and skin disorders with their treatment CO3 : To understand pathophysiological changes in cardiovascular and hematological disorders with their treatment CO4: To understand clinical features, investigations and management of psychiatric disorders. CO5: The student will be able to differentiate paediatric cases and handling the cases will become easier as they can relate theoretical knowledge with practical learning CO6: To formulate the diagnosis and prognosis of various medical pathologies	
8	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.	
9	Outline syllabus		CO Mapping
	Unit 1	**Immunological factors in disease**	
	A	Infection	CO1, CO2
	B	Poisoning	
	C	Endocrine diseases	
	Unit 2	**Environmental and nutritional factors in disease**	
	A	Diseases of the blood	

	B	Food and Nutrition	CO1, CO3
	C	Diseases of the digestive system	

	Unit 3	**Oncology**	
	A	Congenital abnormalities and management	CO2, CO4
	B	Diseases of skin	
	C	Carcinoma of oesophagus and GI bleeding	
	Unit 4	**Neurological disease**	
	A	Problems and management of LBW infants	CO4, CO5,CO6
	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	Epilepsies and Modalities of psychiatric treatment,Psychiatric illness and physical therapy link	
	Unit 5	**Infectious disease**	CO4, CO5,CO6
	A	Viral Hepatitis, Wilson's Disease, Alpha1-antitrypsin deficiency, Tumors of the Liver, Gall stones, Cholycystitis	
	B	Problems and management of LBW infants, Cerebral Palsy- causes, complications, clinical manifestations, treatment; Spina Bifida– management and treatment	
	C	Epilepsies– types, diagnosis and treatment; Recognizing developmental delay, common causes of delay; Orthopedic and Neuromuscular disorders in childhood, clinical features and management; Sensory disorders–problems resulting from loss of vision and hearing.	
	Mode of examination	**Theory**	

	Weightage Distribution	CA	MTE	ETE
		25%	25%	50%
	Text book/s*	Davidson principle and practice of medicine. Clinical methods of medicine by Hutchinson Nelson text book of pediatrics-Behraman &varghan. Essential pediatric by O.P Ghai		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	1	3	3	2	2	2	3	3	2	3	3	2	3	3
CO2	2	2	1	1	3	3	2	3	3	2	2	3	3	3
CO3	2	1	3	3	3	1	1	3	2	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	1	3	3	3
CO5	3	3	2	3	3	2	1	3	3	3	2	3	3	3
CO6	3	2	1	2	3	1	2	2	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2**	**2.33**	**2.83**	**2**	**2**	**2.83**	**2.33**	**2.66**	**2.33**	**2.83**	**2.83**	**3**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 302	
2	Course Title	General Surgery including ENT, Burns and Plastic Surgery	
3	Credits	2	
4	Contact Hours (L)	2-0-0	
	Course Type	CC	
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 understandingof surgical conditions causing disability, list the etiology, clinical features and methods of investigations and management.	
6	Course Outcomes	The student will be able to: CO1: List the indications for surgery, aetiology, clinical features andsurgical 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 post-surgeries' treatment Protocol and gynae conditions treatment. CO6: To formulate management of various surgical interventions	
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	**Pre-operative evaluation and management of surgical patients**	
	A	Fluid, Electrolyte and Acid-Base disturbances,Nutrition in surgical patient.	CO1, CO2
	B	Wound healing	
	C	Causes, Clinical Presentation, Diagnosis and treatment of the following Thoracic Trauma situations	
	Unit 2	**Surgical Oncology**	CO1, CO3
	A	Diseases of the Arteries and Veins,	
	B	Disorders of the Heart	
	C	Surgical Oncology	
	Unit 3	**Burns and Chest Surgeries**	
	A	Burn and shock	CO3, CO5

	B	Disorders of the Chest Wall, Lung and Mediastinum			
	C	Thoracic, lung and cardiac surgeries			
	Unit 4	**Common Gynecology surgeries**			CO2, CO4
	A	Indication, Incision, Physiological changes and of Common operations			
	B	Describe the normal and abnormal physiological eventin gynae conditions			
	C	Physiological changes during pregnancy andmusculoskeletal disorders during pregnancy.			
	Unit 5	**Surgical interventions**			CO4, CO5,CO6
	A	Complications and management of following operations I - Cholecystectomy, Colostomy, Ileostomy, Gastrectomy, Hernias. Acute appendicitis.			
	B	Complications and management of followingoperations II- Appendicectomy Mastectomy, Nephrectomy, Prostectomy, diabetic foot			
	C	Child birth complications, investigation and management and Prolapse of uterus and pelvic			
		inflammatory diseases and other gynae conditions with management.			
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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			

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	2	3	3
CO2	2	2	3	3	3	3	3	3	3	2	2	3	3	3
CO3	2	3	1	1	3	2	3	3	1	3	3	3	3	3
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	3
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	2.33	2.33	2.33	2.16	2.66	2.5	2.5	2.33	2.33	2.33	2	**2.83**	**2.83**	**3**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 303	
2	Course Title	Orthopedics &Traumatology	
3	Credits	3	
4	Contact Hours (L)	3-0-0	
	Course Type	CC	
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 orthopaedic conditions causing disability, list the aetiology, clinical features and methods of investigations and management.	
6	Course Outcomes	The student will be able to: CO1: To understand the traumatology of upper and lower limb fractures with their management. CO2: To understand the pathophysiology of various musculoskeletal conditions, congenital and acquired anomalies with its treatment protocol. CO3: Demonstrate an understanding of orthopaedic conditions causing disability, list the aetiology, clinical features and methods of investigations and management. CO4: To understand the management of various orthopaedic surgeries. CO5: To understand various injuries, factures and deformities of musculoskeletal system with its treatment Protocol. CO6: To formulate the management of orthopedic conditions	
7	Course Description	This subject follows the basic science subjects to provide the knowledge about Orthopaedic conditions the therapist would encounter in their practice.	
8	Outline syllabus		CO Mapping
	Unit 1	**General Orthopaedics**	
	A	Assessment & Diagnosis	CO1, CO2
	B	Inflammatory conditions	CO3, CO4
	C	Degenerative Conditions	CO4, CO5, CO6
	Unit 2	**Regional Orthopaedics**	
	A	Upper limb conditions	CO2, CO4
	B	Lower limb Conditions	CO3,

					CO5,CO6
	C	Spinal Conditions			CO4, CO5,CO6
	Unit 3	**Traumatology & Orthopaedic surgery**			
	A	Orthopaedic Surgeries, Amputation			CO1, CO2
	B	Fractures – Introduction, types, stages of healing, Upper limb Fractures			CO3, CO4
	C	Lower limb and spinal fractures			CO4, CO5
	Unit 4	**Deformities and Disorders**			
	A	Deformities – Congenital and Acquired.			CO2, CO4
	B	Upper limb, lower limb and spinal disorders			CO3, CO5
	C	Bone and joint diseases			CO4, CO5
	Unit 5	**Pathology and conditions**			
	A	Cerebral palsy, Leprosy,			CO1, CO4
	B	Poliomyelitis			CO2,CO5,CO6
	C	Skeletal Tumours			CO1, CO5
	Mode of examination	Theory/			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	3	3	2
CO2	2	2	3	3	3	3	3	3	3	2	2	2	2	3
CO3	2	3	1	1	3	2	3	3	1	3	3	2	3	2
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	2
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2**	**2.66**	**2.66**	**2.5**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 304	
2	Course Title	Clinical Neurology& Psychiatry	
3	Credits	3	
4	Contact Hours (L)	3-0-0	
	Course Type	CC	
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 disabilityand 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 throughoutthe professional career. An understanding of the influence of family, community, and society inthe care of people with neurological	
6	Course Outcomes	The student will be able to: CO1: To understand pathophysiological changes in neurological disorders withtheir assessment CO2: To understand the management of various neurological disorders CO3: Clinical decision-making ability and management expertise CO4: Plan a better rehabilitation care for patients pre and post neurosurgery CO5: To understand the medical and surgical management of various neurological condition. CO6: To evaluate and assess the patient's condition and design the management	
7	Course Description	Following the basic science and clinical science course, this course introduces the student to the neurological conditions which commonlycause disability.	
8	Outline syllabus		CO Mapping
	Unit 1	**Neurological Assessment**	
	A	Neurological assessment, classification anddisorders	CO1, CO2
	B	Neuro ophthalmology	
	C	Deafness, vertigo, and imbalance	
	Unit 2	**Traumatic/ Non traumatic conditions**	
	A	Cerebro-vascular diseases	
	B	Lower cranial nerve paralysis	CO1, CO3
	C	Head injury, metabolic, environmental disorders	
	Unit 3	**Cerebellar disorders**	CO4, CO5
	A	Movement and cerebral disorders	

	B	Cerebellar and coordination disorders	
	C	Spinal cord disorders, peripheral and polyneuropathy	
	Unit 4	**Surgical intervention**	CO3, CO5
	A	Multiple sclerosis and tumors	
	B	Neuromuscular junction disorders and polyneuropathy	
	C	Neurosurgery I-Craniotomy, cranioplasty and Stereotactic surgery, Deep brain stimulation	
	Unit 5	**Motor Neuron Disease**	CO4, CO5
	A	Motor neuron disorders and paediatric disorders	
	B	Psychiatric disorders	
	C	Neurosurgeries II- Laminectomy,	

		Hemilaminectomy, Rhizotomy			
	Mode of examination	**Theory**			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	Davidson's Principles and Practice of Medicine 2. Textbook of Neurology- VictorAdams 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	PSO1	PSO2	PSO3
CO1	3	2	1	1	2	3	3	2	1	2	3	3	2	3
CO2	3	3	3	2	2	2	2	3	1	3	3	2	3	2
CO3	3	1	3	2	3	2	3	1	3	2	1	3	2	3
CO4	2	3	3	2	3	3	2	3	3	2	3	3	3	3
CO5	3	2	1	3	2	3	1	3	2	1	3	3	2	3
CO6	2	1	3	1	1	1	3	2	2	3	2	2	3	2
Average PO's	**2.66**	**2**	**2.33**	**1.83**	**2.16**	**2.33**	**2.3**	**2.33**	**2**	**2.16**	**2.5**	2.66	2.5	2.66

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 305	
2	Course Title	Applied Biomechanics & Kinesiology	
3	Credits	3	
4	Contact Hours (L-T-P)	3-0-0	
	Course Type	CC	
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 affecting muscle contraction and recruitment CO2:Explain mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities CO3:Illustrate 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: Describe biomechanics of shoulder, elbow, wrist, hip, knee, ankle joint and vertebral column. CO6: To evaluate the gait and posture and differentiate normal from pathological.	
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 tissue and structure of musculoskeletal system**	

	A	Biomechanics of bone, articular cartilage, tendon, ligament, nerve and muscles.	CO1, CO6
	B	Biomechanics of the vertebral column: Regional structure and function–Cervical region, thoracic region, lumbar region, sacral region	CO1, CO6
	C	Muscles of the vertebral column & General effects of injury and aging	CO1, CO6
	Unit 2	**Biomechanics of the Upper Limb**	
	A	The shoulder complex: Structure and their integrated function & the effects of immobilization	Co1,CO6
		and injury.	
	B	The elbow complex: Structure and function of the elbow joint, mobility and stability, effect of age gender and injury	Co1,CO6
	C	The wrist and hand complex: Structural components and functions of the wrist complex; structure of the hand complex, prehension; functional position of the wrist and hand	Co1,CO6
	Unit 3	**Biomechanics of the Lower Limb**	
	A	The hip complex: structure and function of the hip joint; hip joint force and muscle function, hip joint pathology	**CO1,CO6**
	B	The knee complex: structure and function of the knee joint–tibiofemoral joint and Patellofemoral joint; effects of injury and disease	**CO1,CO6**
	C	The ankle and foot complex: structure and function of the anklejoint, subtalarjoint, transversetarsaljoint, tarsometatarsaljoints, metatarsophalangeal joints, interphalangeal joints, structure and function of the plantar arches, muscles of the ankle and foot, deviations from normal structure and function– Pes Planus and PesCavus	**CO1,CO6**
	Unit 4	**Analysis of posture**	
	A	Static and dynamic posture, postural control, kinetics and kinematics of posture	**CO4, CO5**
	B	Ideal posture analysis of posture, Upper Cross Syndrome, Lower Cross Syndrome	**CO4, CO5**
	C	Effects of posture on age, age and gender, pregnancy, occupation and recreation	**CO4, CO5**
	Unit 5	**Analysis Of Gait**	

	A	General features of gait, gait initiation, kinematics and kinetics of gait, energy requirements,			**CO4, CO5**
	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			**CO4, CO5**
	C	Injuries and malalignments in gait; Movement Analysis: ADL activities like sitting– to standing, lifting, various grips, pinches			**CO4, CO5**
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Biomechanical principles: Frenkel 2. Joint Structure & amp; Functions : Norkins 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.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	3	1	1	3	1	3	3	3
CO2	2	2	3	3	1	2	1	2	3	2	3	2	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO4	3	1	2	2	2	1	2	2	2	1	2	3	2	2
CO5	3	3	2	3	3	3	3	3	3	3	3	3	3	2
CO6	1	2	1	1	3	2	3	1	2	2	3	3	2	2
Average PO's	2.33	2.33	2.33	2.33	2.33	2.33	2.5	2	2.33	2.33	2.5	2.66	2.5	2.5

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

PRACTICAL

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	CourseCode	PTB 331	
2	CourseTitle	**General Medicine including endocrinology, Paediatrics & Geriatrics (Practical)**	
3	Credits	1	
4	Contact Hours	0-0-2	
	Course Type	CC	
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 and skin disorders with their treatment CO3 : To understand pathophyisological changes in cardiovascular and hematological disorders with their treatment CO4 : To understand clinical features, investigations and management of psychiatric disorders. CO5: The student will be able to differentiate paediatric cases and handling the cases will become easier as they can relate theoretical knowledge with practical learning. CO6: To formulate the diagnosis and prognosis of various medical pathologies	
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	**Immunological factors in disease**	
	A	Infection	CO1, CO2
	B	Poisoning	
	C	Endocrine diseases	
	Unit 2	**Environmental and nutritional factors in disease**	

	A	Diseases of the blood			
	B	Food and Nutrition			CO1, CO3
	C	Diseases of the digestive system			
	Unit 3	**Oncology**			
	A	Congenital abnormalities and management			CO2, CO4
	B	Diseases of skin			
	C	Carcinoma of oesophagus and GI bleeding			
	Unit 4	**Neurological disease**			
	A	Problems and management of LBW infants			CO4, CO5
	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	Epilepsies and Modalities of psychiatric treatment,Psychiatric illness and physical therapy link			
	Unit 5	**Infectious disease**			CO4, CO6
	A	Viral Hepatitis, Wilson's Disease, Alpha1-antitrypsindeficiency, Tumorsof the Liver, Gall stones, Cholycystitis			
	B	Problems and management of LBW infants, Cerebral Palsy- causes, complications, clinical manifestations,treatment; Spina Bifida– management and treatment			
	C	Epilepsies– types, diagnosis and treatment; Recognizing developmental delay, common causes ofdelay; Orthopedic and Neuromuscular disorders in childhood, clinical features and management; Sensorydisorders–problems resulting from loss of vision and hearing.			
	Mode of examination	Practical			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3

COs														
CO1	3	2	1	3	3	2	1	3	3	2	1	3	3	2
CO2	3	1	3	3	1	3	2	2	2	3	2	2	2	3
CO3	3	3	2	2	3	2	3	3	3	3	3	2	3	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	2	2
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	3	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.66**	**2.5**	**2.5**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Program: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 302	
2	Course Title	General Surgery including ENT, Burns and Plastic Surgery	
3	Credits	2	
4	Contact Hours (L)	2-0-0	
	Course Type	CC	
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 understandingof surgical conditions causing disability, list the etiology, clinical features and methods of investigations and management.	
6	Course Outcomes	The student will be able to: CO1: List the indications for surgery, aetiology, clinical features andsurgical 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 post-surgeries' treatment Protocol and gynae conditions treatment. CO6: To formulate management of various surgical interventions	
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	**Pre-operative evaluation and management of surgical patients**	
	A	Fluid, Electrolyte and Acid-Base disturbances,Nutrition in surgical patient.	CO1, CO2
	B	Wound healing	

	C	Causes, Clinical Presentation, Diagnosis and treatment of the following Thoracic Trauma situations			
	Unit 2	**Surgical Oncology**			CO1, CO3
	A	Diseases of the Arteries and Veins,			
	B	Disorders of the Heart			
	C	Surgical Oncology			
	Unit 3	**Burns and Chest Surgeries**			
	A	Burn and shock			CO3, CO5
	B	Disorders of the Chest Wall, Lung and Mediastinum			
	C	Thoracic, lung and cardiac surgeries			
	Unit 4	**Common Gynecology surgeries**			CO2, CO4
	A	Indication, Incision, Physiological changes and of Common operations			
	B	Describe the normal and abnormal physiological eventin gynae conditions			
	C	Physiological changes during pregnancy andmusculoskeletal disorders during pregnancy.			
	Unit 5	**Surgical interventions**			CO4, CO5,CO6
	A	Complications and management of following operations I - Cholecystectomy, Colostomy, Ileostomy, Gastrectomy, Hernias. Acute appendicitis.			
	B	Complications and management of followingoperations II- Appendicectomy Mastectomy, Nephrectomy, Prostectomy, diabetic foot			
	C	Child birth complications, investigation and management and Prolapse of uterus and pelvic			
		inflammatory diseases and other gynae conditions with management.			
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	2	3	3
CO2	2	2	3	3	3	3	3	3	3	2	2	3	3	3
CO3	2	3	1	1	3	2	3	3	1	3	3	3	3	3
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	3
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	2.33	2.33	2.33	2.16	2.66	2.5	2.5	2.33	2.33	2.33	2	2.83	2.83	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		.
Branch: Physiotherapy		**Semester: 5th semester**
1	Course Code	PTB 333
2	Course Title	Orthopaedics &Traumatology (Practical)
3	Credits	1
4	Contact Hours (L)	0-0-2
	Course Type	CC
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 orthopaedic conditions causing disability, list the aetiology, clinical features and methods of investigations and management.
6	Course Outcomes	The student will be able to: CO1: To understand the traumatology of upper and lower limb fractures with their management. CO2: To understand the pathophysiology of various musculoskeletal conditions, congenital and acquired anomalies with its treatment protocol. CO3: Demonstrate an understanding of orthopaedic conditions causing disability, list the aetiology, clinical features and methods of investigations and management. CO4: To understand the management of various orthopaedic surgeries. CO5: To understand various injuries, factures and deformities of musculoskeletal system with its treatment Protocol. CO6: To formulate the management of orthopedic conditions
7	Course Description	This subject follows the basic science subjects to provide the knowledge about Orthopaedic conditions the therapist would encounter in their practice.

8	Outline syllabus		CO Mapping
	Unit 1	**General Orthopaedics**	
	A	Assessment & Diagnosis	CO1, CO2
	B	Inflammatory conditions	CO3, CO4
	C	Degenerative Conditions	CO4, CO5
	Unit 2	**Regional Orthopaedics**	
	A	Upper limb conditions	CO2, CO4,CO6
	B	Lower limb Conditions	CO3, CO5,CO6
	C	Spinal Conditions	CO4, CO5
	Unit 3	**Traumatology & Orthopaedic surgery**	
	A	Orthopaedic Surgeries, Amputation	CO1, CO2
	B	Fractures – Introduction, types, stages of healing, Upper limb Fractures	CO3, CO4

	C	Lower limb and spinal fractures	CO4, CO5
	Unit 4	**Deformities and Disorders**	
	A	Deformities – Congenital and Acquired.	CO2, CO4
	B	Upper limb, lower limb and spinal disorders	CO3, CO5
	C	Bone and joint diseases	CO4, CO5
	Unit 5	**Pathology and conditions**	
	A	Cerebral palsy, Leprosy,	CO1, CO4
	B	Poliomyelitis	CO2,CO5,CO6
	C	Skeletal Tumours	CO1, CO5
	Mode of examination	Theory/	
	Weightage Distribution	CA: 25%	ETE: 75%
	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	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PSO 1	PSO 2	PSO 3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	2	3
CO2	3	1	3	3	1	3	2	2	2	3	2	3	2	3
CO3	3	3	2	2	3	2	3	3	3	3	3	3	3	2
CO4	2	3	3	3	2	3	2	1	3	2	3	2	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	1	2	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.5**	**2.5**	**2.66**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 334	
2	Course Title	Clinical Neurology & 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 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 assessment and treatment CO2: To understand the assessment and management of various neurological disorders CO3: Clinical decision-making ability and management expertise CO4: Plan a better rehabilitation care for patients with pre and post neurosurgery assessment. CO5: To understand the medical and surgical management of various neurological condition. CO6: To evaluate and assess the patient's condition and design the management	
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	**Neurological assessment**	
	A	Neurological assessment, classification and disorders	CO1, CO2,CO6
	B	Neuro ophthalmology	
	C	Deafness, vertigo, and imbalance	
	Unit 2	**Cerebrovaacular diseases**	
	A	Cerebro-vascular diseases	
	B	Lower cranial nerve paralysis	CO1, CO3,CO6
	C	Head injury, metabolic, environmental disorders	

	Unit 3	**Cerebellar disorders**			CO4, CO5
	A	Movement and cerebral disorders			
	B	Cerebellar and coordination disorders			
	C	Spinal cord disorders, peripheral and polyneuropathy			
	Unit 4	**Surgerical Intervention**			CO3, CO5
	A	Multiple sclerosis and tumors			
	B	Neuromuscular junction disorders and polyneuropathy			
	C	Neurosurgery I-Craniotomy, cranioplasty and Stereotactic surgery, Deep brain stimulation			
	Unit 5	**Motor Neuron Disease**			CO4, CO5,CO6
	A	Motor neuron disorders and paediatric disorders			
	B	Psychiatric disorders			
	Mode of examination	Practical			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	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	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	3	2
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	2	3	3
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	3	2	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.83**	**2.83**	**2.66**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	PTB 335	
2	Course Title	Applied Biomechanics & Kinesiology (practical)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
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 affecting muscle contraction and recruitment CO2:Explain mechanics of chest wall during various movements and the patho-mechanics associated with various chest conditions and deformities CO3:Illustrate normal mechanics and patho mechanics of TMJ associated with various conditions CO4:Analyze normal mechanics of posture and gait in various planes and axis CO5: Describe biomechanics of shoulder, elbow, wrist, hip, knee, ankle joint and vertebral column. CO6: To evaluate the gait and posture and differentiate normal from pathological.	
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 tissue and structure of musculoskeletal**	

		system			
	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 Upper Limb			
	Unit 3	**Biomechanics of the Lower Limb**			**CO1,CO6**
	A	Brief			
	B	Movements			
	C	Muscles palpation &joints of Lower Limb			
	Unit 4	**Analysis of posture**			**CO4,CO5,CO6**
	A	kinematics of posture			
	B	Normal posture			
	C	Abnormal posture			
	Unit 5	**Analysis Of Gait**			**CO4,CO5,CO6**
	A	Kinematics and kinetics of gait,			
	B	Normal Gait			
	C	Identify abnormal Gait			
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	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	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	2	3
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	2	3	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	2	3	2
CO6	1	2	2	3	1	2	3	1	2	1	3	3	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.6**	**2.6**	**2.66**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	**PTB 336**	
2	Course Title	**Clinical Education: Evaluation Methods**	
3	Credits	**3**	
4	Contact Hours (L-T-P)	**0-0-6**	
	Course Type	CC	
5	Course Objective	The course would enable the students to evaluate the different systems of the body, and reach to an appropriate diagnosis thereby helping in formulation of an effective treatment plan.	
6	Course Outcomes	CO1. Application of the principles of subjective and objective assessment in evaluation of the nervous system. CO2. Application of the principles of assessment in evaluation of the Cardiopulmonary system. CO3. Application of the principles of assessment in evaluation of the Musculoskeletal system. CO4. Application of the principles of assessment in evaluation of Pain. CO5. Application of the principles of assessment in evaluation of Obesity. CO6: To design the evaluation and assessment methods for various conditions	
7	Course Description	This course shall equip the students with the skill of assessment of various systems of the body, providing a base for the developing an efficient rehabilitation Programme.	
8	Outline syllabus		CO Mapping
	Unit 1	**Assessment Of Nervous System** Higher Mental Functions, Cranial Nerves, Perception, Cognition, Sensory Assessment, Motor Assessment (Joint mobility, muscle strength, LLD, girth measurement), Joint Mobility, Tone, Reflexes (Primitive, Superficial	
	A	Higher Mental Functions, Cranial Nerves, Sensory Assessment, Motor Assessment	CO1, CO2
	B	Joint Mobility, Tone, Reflexes (Primitive, Superficial & Deep), Voluntary Control, Muscle Strength, Limb Length & Girth Measurement,	CO1, CO2
	C	Coordination & Balance Assessment, Involuntary Movements, Posture Evaluation. Gait Analysis	CO1, CO2

	Unit 2	**Assessment of Cardio Vascular & Pulmonary System** Vital parameters, Chest expansion, Symmetry of chest movement, Breath Sounds & heart sound, Exercise Tolerance - six minutes walk test, Theoretical bases of Bruce's protocol, PFT, X-ray Chest, Ankle Brachial Index,		
	A	Tests for Peripheral Arterial & Venous circulation		**CO2,CO 3**
	B	ECG &Echo, ABG analysis		**CO2,CO 3**
	C	Stress Testing & its protocols		**CO2,CO 3**
	Unit 3	**Assessment of Musculoskeletal System** Overview of SOAP Format & ICF Format, Detailed subjective & objective musculoskeletal assessment, Special tests for spine, upper limb and lower limb. Electrodiagnostic tests: EMG/ NCV		
	A	SOAP Format & ICF Format		**CO3,CO 4,CO6**
	B	Detailed subjective & objective musculoskeletal assessment		**CO3,CO 4,CO6**
	C	Special tests for spine, upper limb and lower limb		**CO3,CO 4,CO6**
	Unit 4	**Assessment of pain**		
	A	Theories of Pain		**CO4,CO 5**
	B	Types, nature, Intensity & quality		**CO4,CO 5**
	C	Scales: VAS, Mc Gill's modified questionnaire, Numerical Rating Scale		**CO4,CO 5,CO6**
	Unit 5	**Assessment of Obesity**		
	A	Patho physiology		**CO5**
	B	Assessment - BMI, Waist - Hip Ratio		**CO5**
	C	Body fat percentage, Hydrostatic weighing		**CO5,CO 6**
	Mode of examination	Practical		
	Weightage Distribution	CA	ETE	
		25	75	

	Text book/s*	1. Susan B O's Sullivan, Physical Rehabilitation, Assessment and treatment, F a Davis Company 2. Magee, Orthopaedic Physical examination, Saunders Elsevier 3. Patricia Downie, Cash textbook of Physiotherapy in neurological conditions, JP Publications.	
	Other References	1. Donnatelli, Orthopaedic Physical therapy, Churchill Livingstone Elsevier. 2. Franck I. Katch, Victor L. Katch, Exercise physiology : energy, nutrition, and human Performance	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	2	3	2	2	3	2	3	2	3	3	2	2	3
CO3	1	3	2	3	3	2	3	3	3	2	3	3	3	2
CO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO6	2	3	1	1	2	3	1	2	3	3	2	1	2	2
Average Po's	**2.5**	**2.8**	**2.5**	**2.5**	**2.66**	**2.83**	**2.5**	**2.66**	**2.83**	**2.83**	**2.83**	**2.5**	**2.66**	**2.66**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 5th semester**	
1	Course Code	**PTB 337**	
2	Course Title	**Clinical Education: Outcome Measures**	
3	Credits	**3**	
4	Contact Hours (L-T-P)	**0-0-6**	
	Course Type	Core	
5	Course Objective	This course shall enable the students to gain knowledge about various outcome measures used for the clinical and physiotherapeutic evaluation of conditions affecting the systems of the human body.	
6	Course Outcomes	CO1. Understand and apply the outcome measures related to various conditions of the Nervous System. CO2. Understand and apply the outcome measures related to various conditions of the Cardiovascular and Pulmonary System. CO3. Understand and apply the outcome measures related to various conditions of the Musculoskeletal System. CO4. Understand and apply the outcome measures used in the evaluation of pain, obesity and anthropometry. CO5. Understand and apply the outcome measures related to various aspects of the Sports. CO6: To design the evaluation and assessment methods participation measures	
7	Course Description	The course contains the knowledge of different outcome measures used in the evaluation of different systems of the body.	
8	Outline syllabus		CO Mapping
	Unit 1	**Nervous System-** Higher Mental Functions, Cranial Nerves, Perception, Cognition, Sensory Assessment, Motor Assessment (Joint mobility, muscle strength, LLD, girth measurement), Joint Mobility, Tone, Reflexes (Primitive, Superficial	**CO1**
	A	Outcome measures related to paediatric and Neonatal conditions	
	B	Outcome measures related to Neurological conditions	
	C	Outcome measures related to Geriatric conditions	
	Unit 2	**Cardio Vascular & Pulmonary System**[20 hrs] Vital parameters, Chest expansion, Symmetry of chest movement, Breath Sounds & heart sound, Exercise Tolerance - six minutes walk test, Theoretical bases of Bruce's protocol, PFT, X-ray Chest, Ankle Brachial Index,	**CO2**
	A	Outcome measures used in ICU	
	B	Outcome measures related to Cardiac conditions	
	C	Outcome measures related to Pulmonary conditions	

	Unit 3	**Musculoskeletal System** Overview of SOAP Format & ICF Format, Detailed		**CO3**
		subjective & objective musculoskeletal assessment, Special tests for spine, upper limb and lower limb. Electrodiagnostic tests: EMG/ NCV		
	A	Outcome measures related to upper limb		
	B	Outcome measures related to spine		
	C	Outcome measures related to lower limb		
	Unit 4	**Pain, Obesity and Anthropometry**		**CO4**
	A	Outcome measures related to Pain		
	B	Outcome measures related to obesity		
	C	Anthropometric measures		
	Unit 5	**Sports**		**CO5,CO 6**
	A	Pre Participation measures		
	B	On field measures		
	C	Off field measures		
	Mode of examination	Practical		
	Weightage Distribution	CA	ETE	
		25	75	
	Text book/s*	4. Susan B O's Sullivan, Physical Rehabilitation, Assessment and treatment, F A Davis Company 5. Magee, Orthopaedic Physical examination, Saunders Elsevier 6. Patricia Downie, Cash textbook of Physiotherapy in neurological conditions, JP Publications.		
	Other References	3. Donnatelli, Orthopaedic Physical therapy, Churchill Livingstone Elsevier.		

POs COs	PO1	PO 2	PO 3	PO4	PO 5	PO6	PO 7	PO8	PO9	PO 10	PO 11	PS O1	PSO 2	PSO 3
CO1	3	3	3	3	3	3	3	2	3	3	3	3	3	3
CO2	3	2	3	2	2	3	2	3	2	3	3	2	2	3
CO3	1	3	2	3	3	2	3	3	3	2	3	3	3	2
CO4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO6	2	3	1	1	2	3	1	2	3	3	2	1	2	2
Average Po's	**2.5**	**2.8**	**2.5**	**2.5**	**2.66**	**2.83**	**2.5**	**2.66**	**2.83**	**2.83**	**2.83**	**2.5**	**2.66**	**2.66**

Sixth Semester

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6h semester**	
1	Course Code	PTB 311	
2	Course Title	Obstetrics and gynecology	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	CC	
5	Course Objective	The student will be able to Understand the importance of in obstetrics and gynecology, the basic concepts of techniques, the importance of common gynecological conditions and procedures (in brief). Know the anatomy, Physiology & Pathophysiolgy of reproductive system and its common condition	
6	Course Outcomes	CO1 - understanding of the changing knowledge base in this clinical area CO2- Understand the physiology and anatomy of pregnancy, menstruation. CO3- Understand the pathophysiology of various medical condition related to women health. CO4- Identify the legal and safety issue associated with women with specific physical need. CO5 - Plan, and treatment Programmes for specific women's groups of the community and family planning	
		CO6 – To compile the observations and findings for development and planning of various gynecological conditions	
7	Course Description	In this course the student will learn about the various medical condition related to women health, technique, and effects of physiotherapy in various obstetrics and gynecological conditions.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
	A	Anatomy of female reproductive system	CO1,CO2
	B	physiology of female reproductive system	CO1,CO2

	C	Basic principles of clinical examination, investigation, diagnosis, prognosis of female reproductive system			CO1,CO2
	Unit 2	**Obstetrics**			
	A	Physiological changes during pregnancy, Physiology of menstruation			CO2,CO3
	B	Normal Labor and Delivery , Complication in early pregnancy, Obstetrical complications during pregnancy			CO2,CO3
	C	Operative procedures in Obstetrics			CO2,CO3
	Unit 3	**Gynecology**			
	A	Menstrual abnormalities			CO3,CO4
	B	Reproductive Endocrinology: Evaluation of primary and secondary amenorrhea, management of hyperprolactinemia, Hirsutism, ovulation and PCOD			CO3,CO4,CO6
	C	Endometriosis and adenomyosis - medical and surgical management			CO3,CO4
	Unit 4	**Other gynecological conditions**			
	A	Genital prolapse, surgical management of genital prolapse.			CO3,CO4,CO6
	B	Common urological problems in gynaecology			CO3,CO4
	C	Cancer screening - genital, breast.			CO3,CO4.CO6
	Unit 5	**FAMILY PLANNING**			
	A	Contraception - Temporary methods, Permanent methods. Legal issues			CO4,CO5
	B	MTP Act and procedures of MTP in first & second trimester			CO4,CO5,CO6
	C	Emergency contraception			CO4,CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. C.S.Dawn's Text book of Obstetrics and Neonatology 2. Novacs Gynecology Jeffcoat's Principle of Gynaecology 3. Family Planning Practices by SK Chaudhary			
	Other References				

POs COs	PO 1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3
CO1	3	2	1	3	3	2	1	3	3	2	1	2	3	3
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	2
CO3	3	3	2	2	3	2	3	3	3	3	3	2	2	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	2
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	2
CO6	1	2	2	3	1	2	3	1	2	1	3	2	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.5**	**2.66**	**2.3**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	PTB 312	
2	Course Title	**Cardiovascular Sciences including lympathic system**	
3	Credits	2	
4	Contact Hours (L-T-P)	2-0-0	
	Course Type	CC	
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 identify the signs and symptoms of cardio respiratory conditions. 3. The students will be able to identify medical and surgical management of cardiovascular and pulmonary conditions	
6	Course Outcomes	The student will be able to: CO1: Recalling the anatomy and physiology of cardiovascular and pulmonary system CO2: Remembering the etiology, pathology, clinical features and medical or surgical management of various diseases/disorders affecting the cardiovascular and pulmonary conditions. CO3: Understanding the basic concepts of diagnostic assessment of various cardiovascular and pulmonary diseases/disorders. CO4: Understanding the basic concepts of medical and surgical management of various cardiovascular and pulmonary diseases/disorders. CO5: Understanding the objective examination of cardiovascular and pulmonary conditions CO6: To evaluate and assess various cardiovascular conditions and design their medical management	
7	Course Description	The objective of this course is that after lectures and demonstration in additionto 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 and Lower respiratory tract–Trachea, Bronchial tree, Broncho-pulmonary segments, Respiratory unit, hilum of lung, Pleura, intra pleural space, intrapleural pressure, surfactant. Muscles of respiration	CO1, CO2
	B	Cardio vascular system-	CO1,
		Chambers of heart, semi-lunar and atrioventricular valves, Coronary circulation, conductive system of heart, Cardiac cycle, ECG, Heart sounds, Blood pressure, pulse, cardiac output.	CO2
	C	Mechanics of respiration – Chest wall movements, lung & chest wall compliance, V/Q relationship, airway resistance , Respiratory center	CO1, CO2
	Unit 2	**Cardiopulmonary system**	
	A	Definition ,etiology , pathogenesis , clinical features and management of the following disorders: Coronary heart disease, Heart failure, Cardiac arrest, Rheumatic fever, Hypertension, Infective endocarditis, Myocarditis & cardiomyopathy, Congenital Heart diseases, Valvular heart disease, Cardiac tumors, Peripheral Vascular Disease (beurger's disease, raynauld's disease, Deep vein thrombosis, Thromboangitis obliterans),	CO1, CO2 CO3
	B	Definition, etiology pathogenesis , clinical features and management of the following disorders: COPD, Respiratory failure, Asthma, Bronchiectasis, Cystic Fibrosis, Upper Respiratory Tract Infections, Pneumonia, Tuberculosis, Interstitial Lung Diseases and Diseases of the pleura, diaphragm and chest wall.	CO1, CO2, CO3
	C	Examination of the Cardio-vascular System: ECG, Exercise Stress Testing, Radiology, Examination and Investigations of diseases of arteries and veins, Examination of the Respiratory System – Breath sounds, Chest Radiographs, Pulmonary Function Testing, Arterial Blood Gas Analysis	CO3,CO5, CO6
	Unit 3	**RESPIRATORY SYSTEM**	
	A	Chest wall disorders Definition, Clinical features, diagnosis and management for the following disorders– Chest wall deformities, Chest wall tumors, Pneumothorax, Pleural Effusion, Empyema Thoracis, Lung abscess	CO1,CO2,CO3
	B	Cancers and tumors - Bronchogenic Carcinoma, Bronchial Adenomas, Metastatic tumors of the Lung, tracheal Stenosis, Congenital trachea malacia	CO1,CO2,CO3
	C	Neoplasms of the trachea, Lesions of the Mediastinum.	CO2,CO3

	Unit 4	**Lymphatic system**			
	A	Lymph and its composition, lymphatic vessels, lymphatic ducts, flow of lymph , lymph nodes and its functions			CO3,CO4
	B	Major accessory lympathic organs(tonsils, spleen , thymus)			CO3,CO4
		General functions of lymphatic system (Returns Fluid from Tissues to Blood, Returns Large Molecules to Blood, Absorb and Transport Fats, Hemopoiesis, Body Defense/Immunity)			
	C	Diseases of Lymphatic System : Edema Metastatic Cancers Hodgkin Disease Non-Hodgkin Lymphoma Lymphadenitis Lymphangitis Lymphocytosis			CO3,CO4
	Unit 5	**REGULATION OF RESPIRATION**			
	A	Neural & chemical regulation of respiration			CO1,CO2
	B	Lung volumes and lung capacities, Spirometer, lung function test			CO3,CO5
	C	Pulmonary circulation, Lung sounds, cough reflex.			CO3,CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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. 4. Brothers. 5. The-Brompton Guide to Chest Physical therapy 6. Cardiopulmonary Physical Therapy- Irwin and Tecknin, Mosby. 7. Cardiovascular/Respiratory physiotherapy- Smith & Ball- Mosby 8. ACSM Guidelines for exercise testing and prescription- ACSM- Williams and Wilkins.	
		9. Chest physiotherapy in intensive care unit- Mackenzie et al - Williams and Wilkins. 10. Cardiopulmonary Physical Therapy- Donna Frown Feltter 11. Understanding Mechanical Ventilation- Hasan	
	Other References	1. Physiotherapy in respiratory Care- Hough 2. Respiratory Physiotherapy- Harden 3. Respiratory Care- Fink & Hunt	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	3	1	1	3	1	3	3	3
CO2	2	2	3	3	1	2	1	2	3	2	3	2	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO4	3	1	2	2	2	1	2	2	2	1	2	3	2	2
CO5	3	3	2	3	3	3	3	3	3	3	3	3	3	2
CO6	1	2	1	1	3	2	3	1	2	2	3	3	2	2
Average PO's	**2.33**	**2.33**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2**	**2.33**	**2.33**	**2.5**	**2.66**	**2.5**	**2.5**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	PTB 313	
2	Course Title	**Respiratory System**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	CC	
5	Course Objective	**1.** To impart the Knowledge and skills related to respiratory system diseases. **2.** To teach clinical aspects, manifestations, investigations and approach to the diseases of the respiratory system. **3.** To master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	The student will be able to: CO1: To recognize and initiate assessment for diseases of the respiratory system. CO2: To understand the basic principles of Pulmonary medicine. CO3: To secure the pulmonary disease diagnosis and related implications. CO4: To use Aids and appliances to Initiate breathing assessment. CO5: To perform in and be part of respiratory care team. CO6: To evaluate and assess various pulmonary conditions and design their medical management	
7	Course Description	Pulmonary medicine covering the respiratory system is an important aspect of clinical learning. It is as per the standard clinical curriculum.	
8	Outline syllabus		CO Mapping
	Unit 1	**Functional Anatomy, Physiology, and Investigations.**	
	A	Applied anatomy and Physiology	CO1, CO2
	B	Lung defense	CO1, CO2
	C	Pulmonary investigations	CO1, CO2,CO6
	Unit 2	**Major manifestations of respiratory diseases.**	
	A	Dyspnea	CO1, CO3
	B	Chest pain	CO1, CO3

	C	Sputum production, & Haemoptysis			CO1, CO3
	Unit 3	**RESPIRATORY SYSTEM**			
	A	Obstructive and restrictive diseases			CO1,CO3
	B	COPD			CO1,CO3
	C	Tumors			CO1,CO3
	Unit 4	**Infections of the respiratory system**			
	A	Upper respiratory tract infections			CO2,CO4
	B	Pneumonias including Covid-19			CO2,CO4
	C	Pulmonary TB			CO2,CO4,CO6
	Unit 5	**Diseases of pleura, diaphragm and chest wall**			
	A	Diseases of the pleura			CO1,CO5
	B	Diseases of the diaphragm			CO1,CO5
	C	Deformities of the chest wall.			CO1,CO5,CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Harrison's Principles of Internal Medicine ed. Petersdorf (McGraw Hill) 2. Cecil Text book of Medicine ed. Wyngaarden 3. Crofton & Douglas Respiratory diseases ed. Seaton et al (Oxford)			
	Other References	4. Pulmonary diseases & disorders by Fishman (McGraw Hill) 5. 5. Textbook on Pulmonary disease by Fraser & Pare			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	3	1	1	3	1	3	3	3
CO2	2	2	3	3	1	2	1	2	3	2	3	2	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO4	3	1	2	2	2	1	2	2	2	1	2	3	2	2
CO5	3	3	2	3	3	3	3	3	3	3	3	3	3	2
CO6	1	2	1	1	3	2	3	1	2	2	3	3	2	2
Average PO's	**2.33**	**2.33**	**2.33**	**2.33**	**2.33**	**2.33**	**2.5**	**2**	**2.33**	**2.33**	**2.5**	**2.66**	**2.5**	**2.5**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	**PTB 314**	
2	Course Title	Environmental Health And Health Promotion	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	SEC	
5	Course Objective	**1.** To impart the Knowledge and skills related to environmental health and health promotion. **2.** To teach environmental health promotion required to be both a team member and a team leader in either an in-hospital or out-of-hospital setting. **3.** To master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	CO1: 1. To Integrate philosophical, ethical, epidemiological, and environmental issues in the analysis of health promotion, health education, and compliance theories and concepts. CO2: 2. Relate health belief models to observed health behaviors of individuals throughout the lifespan. CO3: 3. Analyze the effect of psychological, physiological, sociological, cultural, and spiritual variables on client health and health promotion. CO4: Identify sources and routes of environmental exposures to chemical, physical, and biological hazards for defined populations. CO5: Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety CO6: To incorporate various environmental and health strategies into daily practice	
7	Course Description	Topics covered include basic principles of exposure assessment; essentials of environmental history-taking, and laws and regulations relating to environmental health and health promotion. Clinical topics include heavy metal exposures; and environmental lung diseases, noise induced hearing loss, neurotoxicants, MSK injuries, and travel medicine. Regulatory and other approaches to reduce exposure will be examined and important public health implications will be discussed.	
8	Outline syllabus		CO Mapping
	Unit 1	**Health and health promotion**	
	A	Basic Concepts and definitions	CO1, CO2
	B	Risk Assessment & Strategies for Health Promotion	CO1,CO2
	C	Health promotion for different populations.	CO1,CO2, CO6
	Unit 2	**Air Pollutions and Health**	
	A	AQI-PM 2.5and PM 10	CO1, CO3
	B	Indoor Pollution	CO1, CO3

	C	Strategies for air pollution			CO1, CO3,CO6
	Unit 3	**Water pollution**			
	A	Water filtration and treatments			CO1,CO3
	B	Natural mineral water versus RO water			CO1,CO3
	C	Water storage, recycling, and policies			CO1,CO3
	Unit 4	**Indoor environment**			
	A	AC			CO2,CO4
	B	Indoor lighting			CO2,CO4
	C	Lifestyle and Physical activity for health			CO2,CO4, CO6
	Unit 5	**Environmental health promotion**			
	A	Technology and its usage			CO1,CO5
	B	Assessment for risk			CO1,CO5, CO6
	C	Local and Global outlook			CO1,CO5, CO6
	Mode of examination				
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	Barry, R. G. 2003. Atmosphere, Weather and Climate. Routledge Press, UK Philander, S.G. 2012. Encyclopedia of Global Warming and Climate Change (2nd edition). Sage Publications. Textbook of Clinical and Environmental Medicine, 2nd Edition, 2004, by Linda Rosenstock, Mark Cullen, Carl Brodken, and Carrie Redlich			
	Other References	Grimm, N. B., Faeth, S. H., et al. 2008. Global Change and the Ecology of Cities. Science 319: 756-760. Morgan, M.T. (2003). Environmental Health. (3rd ed.). Belmont, CA: Wadsworth/Thomason Learning.			

POs COs	PO 1	PO 2	PO 3	PO 4	PO5	PO 6	PO 7	PO8	PO 9	PO 10	PO1 1	PSO 1	PSO 2	PSO 3
CO1	3	3	3	3	3	2	3	3	3	2	3	3	2	3
CO2	1	3	2	3	1	3	2	3	2	3	3	2	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3	3	2	3
CO4	2	3	1	3	2	3	3	1	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3	3	3	3
CO6	2	3	1	2	2	2	3	2	1	2	3	2	3	2
Average PO's	**2.33**	**2.83**	**2.16**	**2.66**	**2.33**	**2.66**	**2.83**	**2.5**	**2.33**	**2.66**	**3**	**2.66**	**2.66**	**2.83**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 6th semester**
1	Course Code	PTB 315
2	Course Title	Community Medicine
3	Credits	2
4	Contact Hrs (L)	2-0-0
	Course Type	CC
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. CO6: To be ready to go in community for serving by spreading awareness.	
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	**Introduction**	
	A	Health and Disease	CO1, CO2
	B	Epidemiology, definition and scope	CO1,CO2
	C	Public health administration	CO1,CO2
	Unit 2	**Policies and control management**	
	A	Health Programme in India	CO1, CO3
	B	Hospital waste management	CO3,CO6
	C	Disaster Management	CO5,CO6
	Unit 3	**Occupational health**	
	A	Occupational environment, Occupational hazards, Occupational diseases	CO2, CO3
	B	Prevention of occupational diseases	CO3,CO6
	C	Nutritional education	CO3,CO6
	Unit 4	**National schemes and acts**	CO4, CO5
	A	National health care and delivery system	CO4,CO6
	B	Introduction to quality and patient safety	CO5,CO6
	C	Health Education	CO6
	Unit 5	**Health management**	
	A	Mental health	CO4, CO5
	B	Approaches to health education	CO5,CO6
	C	Principles of health education	CO5,CO6

	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	Park and Park			

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO 10	PO11	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	2	3
CO2	3	1	3	3	1	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	3	2	3
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.66**	**2.66**	**2.83**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	PTB 316	
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 procedures, safety issues in Radiology clinicalpractice CO5: To understand interpretation of CT and MRI CO6: To correlate the physical findings with Radiographic findings	
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 tosave lives.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
	A	Image interpretation of various investigations	CO1, CO2
	B	History and how medical image helps	CO1, CO2
	C	What imaging studies reveals-Interpretation	CO1, CO2
	Unit 2	**RADIOGRAPHY**	
	A	Procedures for radiography	CO1, CO3
	B	mammography	CO2,CO4
	C	Indications and contraindications of radio andmammography	CO2,CO6
	Unit 3	**FLUROSCOPY**	CO2, CO3
	A	Fluoroscopy and US	CO4,CO5,CO6
	B	Procedure of fluoroscopy and US	
	C	Indications and contraindications of variousradiographs	
	Unit 4	**MRI**	
	A	MRI	CO4,CO5
	B	Equipment used in MRI	CO5,CO6

	C	Procedure indications and contraindicationsMRI			CO4, CO5
	Unit 5	**CT SCAN**			
	A	Equipment used in CT scan			CO4, CO5
	B	Procedure indications and contraindications Ctscan			CO5,CO6
	C	Radiation protection, TLD, TDS ROLE, Basics ofAERB guide line, Patient care			CO5,CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		30%	20%	50%	
	Text book/s*	Textbook of radiology			

POsCOs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	2	3	3	3	2	1	3	2	3
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	1	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.33**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**	**2.16**	**2.16**	**2.33**	**2.16**	**2.66**	**2.66**	**2.83**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

PRACTICAL

School: SSAHS		**Batch : 2022-26**
Programme: BPT		**Current Academic Year: 2022-23**
Branch: Physiotherapy		**Semester: 6th semester**
1	Course Code	PTB 341
2	Course Title	Obstetrics and gynecology (Practical)
3	Credits	1
4	Contact Hours (L-T-P)	2-0-0
	Course Type	Compulsory /Elective/Open Elective

5	Course Objective	The student will be able to Understand the importance of in obstetrics and gynecology, the basic concepts of techniques, the importance of common gynecological conditions and procedures (in brief). Know the anatomy, Physiology & Pathophysiolgy of reproductive system and its common condition	
6	Course Outcomes	CO1 - understanding of the changing knowledge base in this clinical area CO2- Understand the physiology and anatomy of pregnancy, menstruation. CO3- Understand the pathophysiology of various medical condtion related to women health. CO4- Identify the legal and safety issue associated with women with specific physical need. CO5 - Plan, and treatment Programmes for specific women's groups of the community and family planning CO6 – To compile the observations and findings for development and planning of various gynecological conditions	
7	Course Description	In this course the student will learn about the various medical condition related to women health, technique, and effects of physiotherapy in various obstetrics and gynecological conditions.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
	A	Anatomy of female reproductive system	CO1,CO2
	B	physiology of female reproductive system	CO1,CO2
	C	Basic principles of clinical examination, investigation, diagnosis, prognosis of female reproductive system	CO1,CO2,CO6
	Unit 2	**Obstetrics**	
	A	Physiological changes during pregnancy, Physiology of menstruation	CO2,CO3
	B	Normal Labor and Delivery , Complication in early pregnancy, Obstetrical complications during pregnancy	CO2,CO3
	C	Operative procedures in Obstetrics	CO2,CO3,CO6
	Unit 3	**Gynecology**	
	A	Menstrual abnormalities	CO3,CO4

	B	Reproductive Endocrinology: Evaluation of primary and secondary amenorrhea, management of hyperprolactinemia, Hirsutism, ovulation and PCOD			CO3,CO4
	C	Endometriosis and adenomyosis - medical and surgical management			CO3,CO4
	Unit 4	**Other gynecological conditions**			
	A	Genital prolapse, surgical management of genital prolapse.			CO3,CO4
	B	Common urological problems in gynaecology			CO3,CO4
	C	Cancer screening - genital, breast.			CO3,CO4,CO6
	Unit 5	**FAMILY PLANNING**			
	A	Contraception - Temporary methods, Permanent methods. Legal issues			CO4,CO5,CO6
	B	MTP Act and procedures of MTP in first & second trimester			CO4,CO5,CO6
	C	Emergency contraception			CO4,CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. C.S.Dawn's Text book of Obstetrics and Neonatology 2. Novacs Gynecology Jeffcoat's Principle of Gynaecology 3. Family Planning Practices by SK Chaudhary			

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	3	3	2	2	1	2	2	3	2
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	2	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	3	3	2	1	3	2	3	2	2	3	3
CO6	1	2	2	3	2	2	3	3	2	1	3	2	3	2
Average PO's	**2.5**	**2.5**	**2.16**	**2.5**	**2.66**	**2.5**	**2.33**	**2.5**	**2.16**	**2.16**	**2.33**	**2.33**	**2.833**	**2.66**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	PTB 342	
2	Course Title	Cardiovascular sciences including Lymphatic System (Practical)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Status	CC	
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 identify the signs and symptoms of cardio respiratory conditions. 3. The students will be able to identify medical and surgical management of cardiovascular and pulmonary conditions	
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 measures with appropriate clinical reasoning to improve pulmonary function. CO5: Understanding the basic concepts of diagnostic assessment of various cardiovascular and pulmonary diseases/disorders. CO6: To evaluate and assess various cardiovascular conditions and design their medical management	
7	Course Description	Following the basic science and clinical science course,this course introduces the Student in cardio-thoracic conditions which commonly cause 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**	
	A	Brief	CO1, C02
	B	Demonstration	CO1, C02

	C	Assesment tools and techniques, outcome measures.			CO1, C02
	Unit 2	**Examination of Heart and lung sounds and Intercostal percussion note**			
	A	Brief			CO3,CO4
	B	Demonstration			CO3,CO4,CO6
	C	Experimantation			CO3,CO4,CO6
	Unit 3	**Monitoring of Blood Pressure, ECG, PFT and ABG**			
	A	Brief			CO3,C04
	B	Demonstration			CO3,C04,CO6
	C	Experimantation			CO3,C04,CO6
	Unit 4	**Exercise stress testing**			
	A	Brief			CO1,CO2
	B	Demonstration			CO1,CO2
	C	Techniques			CO1,CO2
	Unit 5	**Peripheral arterial disease (Ankle Brachial Index and Toe Brachial Index) and Lymphedema stages**			
	A	Brief			CO1,CO5
	B	Demonstration			CO1,CO5,CO6
	C	Techniques			CO1,CO5,CO6
	Mode of examination	Practical/Viva			
		CA	MTE	ETE	
	Weightage Distribution	25%	0%	75%	
	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 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 Respiratory Care- Fink & Hunt

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	2	3	3	3	2	1	3	2	3
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	1	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.33**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**	**1 2.**	**2.16**	**2.33**	**2.16**	**2.66**	**2.66**	**2.83**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	PTB 343	
2	Course Title	**Respiratory System**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	CC	
5	Course Objective	**1.** To impart the Knowledge and skills related to respiratory system diseases. **2.** To teach clinical aspects, manifestations, investigations and approach to the diseases of the respiratory system. **3.** To master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	The student will be able to: CO1: To recognize and initiate assessment for diseases of the respiratory system. CO2: To understand the basic principles of Pulmonary medicine. CO3: To secure the pulmonary disease diagnosis and related implications. CO4: To use Aids and appliances to Initiate breathing assessment. CO5: To perform in and be part of respiratory care team. CO6: To evaluate and assess various pulmonary conditions and design their medical management	
7	Course Description	Pulmonary medicine covering the respiratory system is an important aspect of clinical learning. It is as per the standard clinical curriculum.	
8	Outline syllabus		CO Mapping
	Unit 1	**Functional Anatomy, Physiology, and Investigations.**	
	A	Applied anatomy and Physiology	CO1, CO2
	B	Lung defense	CO1, CO2
	C	Pulmonary investigations	CO1, CO2,CO6
	Unit 2	**Major manifestations of respiratory diseases.**	
	A	Dyspnea	CO1, CO3
	B	Chest pain	CO1, CO3
	C	Sputum production, & Haemoptysis	CO1, CO3
	Unit 3	**RESPIRATORY SYSTEM**	

	A	Obstructive and restrictive diseases			CO1,CO3
	B	COPD			CO1,CO3
	C	Tumors			CO1,CO3
	Unit 4	**Infections of the respiratory system**			
	A	Upper respiratory tract infections			CO2,CO4
	B	Pneumonias including Covid-19			CO2,CO4
	C	Pulmonary TB			CO2,CO4
	Unit 5	**Diseases of pleura, diaphragm and chest wall**			
	A	Diseases of the pleura			CO1,CO5
	B	Diseases of the diaphragm			CO1,CO5
	C	Deformities of the chest wall.			CO1,CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Harrison's Principles of Internal Medicine ed. Petersdorf (McGraw Hill)			
		2. Cecil Text book of Medicine ed. Wyngaarden Crofton & Douglas Respiratory diseases ed. Seaton et al (Oxford)			
	Other References	4. Pulmonary diseases & disorders by Fishman (McGraw Hill) 5. Textbook on Pulmonary disease by Fraser & Pare			

POs COs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	2	3	3	3	2	1	3	2	3
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	1	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.**	**2.33**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**	**2.16**	**2.16**	**2.33**	**2.16**	**2.66**	**2.66**	**2.83**

1- Slight (Low)

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	**PTB 344**	
2	Course Title	**ENVIRONMENTAL HEALTH AND HEALTH PROMOTION (Practical)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	CC	
5	Course Objective	**1.** to impart the skills related to environmental health and health promotion. **2.** to inculcate environmental health promotion required to be both a team member and a team leader in either an in-hospital or out-of-hospital setting. **3.** to master these skills among learners and review their knowledge constantly.	
6	Course Outcomes	CO1: 1. To show expertise in the analysis of health promotion, health education, and compliance theories and concepts. CO2: 2. To explain health belief models to observed health behaviors of individuals throughout the lifespan. CO3: 3. To Analyze the effect of psychological, physiological, sociological, cultural, and spiritual variables on client health and health promotion. CO4: Identify sources and routes of environmental exposures to chemical, physical, and biological hazards for defined populations. CO5: Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and safety CO6: To incorporate various environmental and health strategies into daily practice	
7	Course Description	Topics covered include basic principles of exposure assessment; essentials of environmental history-taking, and laws and regulations relating to environmental health and health promotion. Clinical topics include heavy metal exposures; and environmental lung diseases, noise induced hearing loss, neurotoxicants, MSK injuries, and travel medicine. Regulatory and other approaches to reduce exposure will be examined and important public health implications will be discussed.	
8	Outline syllabus		CO Mapping
	Unit 1	**Health and health promotion**	
	A	Application of Basic Concepts and definitions	CO1, CO2
	B	Risk Assessment & Strategies for Health Promotion	CO1,CO2
	C	Application Health promotion for different populations.	CO1,CO2, CO6
	Unit 2	**Air Pollutions and Health**	
	A	Application of AQI-PM 2.5and PM 10	CO1, CO3
	B	Indoor Pollution	CO1, CO3
	C	Strategies for air pollution	CO1, CO3

	Unit 3	**Water pollution**	
	A	Application of Water filtration and treatments	CO1,CO3
	B	Natural mineral water versus RO water	CO1,CO3
	C	Water storage, recycling, and policies	CO1,CO3
	Unit 4	**Indoor environment**	
	A	AC	CO2,CO4
	B	Indoor lighting	CO2,CO4
	C	Application of Lifestyle and Physical activity for health	CO2,CO4, CO6
	Unit 5	**Environmental health promotion**	
	A	Technology and its usage	CO1,CO5
	B	Assessment for risk	CO1,CO5
	C	Application of Local and Global outlook	CO1,CO5, CO6
	Mode of examination		
	Weightage Distribution	CA: 25% / ESE: CE-VIVA 25% / External Exam Practical 50%	
	Text book/s*	Barry, R. G. 2003. Atmosphere, Weather and Climate. Routledge Press, UK Philander, S.G. 2012. Encyclopedia of Global Warming and Climate Chane (2nd edition). Sage Publications. Textbook of Clinical and Environmental Medicine, 2nd Edition, 2004, by Linda Rosenstock, Mark Cullen, Carl Brodken, and Carrie Redlich	
	Other References	Grimm, N. B., Faeth, S. H., et al. 2008. Global Change and the Ecology of Cities. Science 319: 756-760. Morgan, M.T. (2003). Environmental Health. (3rd ed.). Belmont, CA: Wadsworth/Thomason Learning.	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO 9	PO1 0	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	3	3	3	2	3	3	2	3
CO2	1	3	2	3	1	3	2	3	2	3	3	2	3	3
CO3	3	3	3	2	3	3	3	3	3	3	3	3	2	3
CO4	2	3	1	3	2	3	3	1	3	3	3	3	3	3
CO5	3	2	3	3	3	3	3	3	2	3	3	3	3	3
CO6	2	3	1	2	2	2	3	2	1	2	3	2	3	2
Average PO's	**2.33**	**2.83**	**2.16**	**2.66**	**2.33**	**2.66**	**2.83**	**2.5**	**2.33**	**2.66**	**3**	**2.66**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	**PTB 345**	
2	Course Title	**Clinical Education – Systems interaction (CT)**	
3	Credits	**3**	
4	Contact Hours (L-T-P)	**0-0-6**	
	Course Type	CC	
5	Course Objective	**1.** To enable the students to perform reflective thinking for systems interaction. **2.** To enable the students to make cognitive maps for systems interaction.. **3.** To enable the students to perform clinical concept map of case presentation and make implications for further assessment.	
6	Course Outcomes	CO1: To perform reflective thinking. CO2: To perform planning for assessment using cognitive map. CO3: To demonstrate development of clinical concept map. CO4: To demonstrate implications for further assessment. CO5: To demonstrate mastery of clinical assessment for systems interaction. CO6: To design the evaluation and assessment methods and physiotherapy treatment for various conditions	
7	Course Description	Systems interaction in clinical settings represents a milestone for better patient management. It is for all stakeholder's accountability and responsibility. It has reflective practice and concept maps as well. Physiotherapists within the scope of practice shall take part in this effectively	
8	Outline syllabus		CO Mapping
	Unit 1	**Reflective thinking**	
	A	Introduction to reflection in action	CO1, CO2
	B	Introduction to reflection on action	CO1,CO2
	C	Cases	CO1,CO2, CO6
	Unit 2	**Cognitive maps**	
	A	Making cognitive maps	CO1, CO3
	B	Using Cognitive maps	CO1, CO3
	C	Cases	CO1, CO3,CO6
	Unit 3	**Clinical concept maps**	
	A	Making clinical concept maps	CO1,CO3
	B	Using clinical concept maps	CO1,CO3

	C	Cases			CO1,CO3, CO6
	Unit 4	**Systems interaction**			
	A	Mirroring of presentation in different systems			CO2,CO4
	B	Referred symptoms			CO2,CO4
	C	Cases			CO2,CO4, CO6
	Unit 5	**Implications for PT**			
	A	On the primary presentation			CO1,CO5
	B	On the secondary presentation			CO1,CO5
	C	Cases			CO1,CO5, CO6
	Mode of examination	Clinical examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	• https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf • http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf			

POs COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3
CO1	3	3	2	3	3	2	3	2	3	1	3	2	3	3
CO2	3	2	3	2	2	3	2	3	2	3	1	3	2	3
CO3	3	3	2	3	1	2	3	1	3	2	3	3	3	2
CO4	3	3	2	3	3	2	3	3	1	3	3	3	3	3
CO5	3	3	3	3	2	3	3	2	3	3	1	3	3	3
CO6	1	2	3	3	2	1	1	2	3	3	2	1	3	2
Average PO's	**2.66**	**2.66**	**2.5**	**2.83**	**2.16**	**2.16**	**2.5**	**2.16**	**2.5**	**2.5**	**2.16**	**2.5**	**2.83**	**2.66**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 6th semester**	
1	Course Code	**PTB 346**	
2	Course Title	**Clinical Education - Differential Diagnosis (CT)**	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	**4.** To enable the students to perform differential diagnosis **5.** To enable the students to make plan of confirmatory diagnosis. **6.** To enable the students to perform physiotherapy diagnosis and make implications for PT.	
6	Course Outcomes	CO1: To perform differential diagnosis. CO2: To perform planning for confirmatory diagnosis. CO3: To demonstrate development of Physiotherapy diagnosis. CO4: To demonstrate implications for physiotherapy. CO5: To demonstrate mastery of clinical differential diagnosis. CO6: To design the evaluation and assessment methods and physiotherapy treatment for various conditions	
7	Course Description	Differential diagnosis in clinical settings represents a milestone for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively	
8	Outline syllabus		CO Mapping
	Unit 1	**Differential diagnosis (DD) in neuromusculoskeletal presentation.**	
	A	Neuromusculoskeletal presentations in PT	CO1, CO2
	B	Differential diagnosis	CO1,CO2
	C	Cases	CO1,CO2, CO6
	Unit 2	**Differential diagnosis in systemic presentation.**	
	A	Systemic Presentations	CO1, CO3
	B	Differential diagnosis	CO1, CO3
	C	Cases	CO1, CO3,CO6
	Unit 3	**DD & Contraindications, precautions, and red flags.**	
	A	Contraindications	CO1,CO3

	B	Precautions			CO1,CO3
	C	Indications for referral			CO1,CO3
	Unit 4	**Functional diagnosis**			
	A	Functional diagnosis			CO2,CO4
	B	Physiotherapy terms for functional diagnosis			CO2,CO4
	C	Cases			CO2,CO4
	Unit 5	**Physiotherapy diagnosis & implications for PT**			
	A	PT diagnosis			CO1,CO5, CO6
	B	PT implications &Problem based PT plan			CO1,CO5, CO6
	C	Cases			CO1,CO5, CO6
	Mode of examination	Clinical examination			
	Weig htage Distri	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	butio n				
	Text book/s*	Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	• https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf • http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

1- Slight (Low)

2- Moderate (Medium)

3- Substantial (High)

Semester Seven

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7TH semester**	
1	Course Code	PTB 401	
2	Course Title	Physiotherapy in Orthopedics & sports medicine	
3	Credits	3	
4	Contact Hours (L)	3-0-0	
	Course Type	Compulsory	
5	Course Objective	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify disabilities due to musculoskeletal dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore musculoskeletal function.	
6	Course Outcomes	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. CO6: To design a physiotherapy protocol for various orthopaedic 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	**General assessment and physiotherapyTreatment**	
	A	Assessment & Diagnosis	CO1, CO2
	B	Inflammatory conditions	CO4, CO6
	C	Degenerative Conditions	CO5, CO6
	Unit 2	**Regional Physiotherapy assessment and treatment**	
	A	Upper limb conditions	CO2, CO4, CO6
	B	Lower limb Conditions	CO3, CO6
	C	Spinal Conditions	CO3, CO6
	Unit 3	**Physiotherapy for Traumatic conditions & Orthopaedic surgery**	CO3, CO4
	A	Orthopaedic Surgeries, Amputation	CO3, CO4
	B	Fractures – Introduction, types, stages of healing, Upper limb Fractures	CO5, CO6

	C	Lower limb and spinal fractures			CO4, CO5
	Unit 4	**Physiotherapy for Deformities and Disorders**			
	A	Deformities – Congenital and Acquired.			CO5, CO1, CO6
	B	Upper limb, lower limb and spinal disorders			CO5, CO1, CO6
	C	Bone and joint diseases			CO5, CO1, CO6
	Unit 5	**Physiotherapy in Pathology and conditions**			
	A	Cerebral palsy, Leprosy,			CO1, CO4, CO6
	B	Poliomyelitis			CO1, CO4, CO6
	C	Skeletal Tumours			CO1, CO4, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	3	3	2
CO2	2	2	3	3	3	3	3	3	3	2	2	2	2	3
CO3	2	3	1	1	3	2	3	3	1	3	3	2	3	2
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	2
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2**	**2.66**	**2.66**	**2.5**

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

School:SSAHS		Batch : 2023-27	
Programme: BPT		**Current Academic Year: 2022-23**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 402	
2	Course Title	Physiotherapy In Neurology And Neurosurgery	
3	Credits	**3**	
4	Contact Hours (L-T-P)	**3-0-0**	
	Course Type	CC	
5	Course Objective	1. The objective of this course is , 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 assessment 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 make diagnosis and differential diagnosis of different neurological conditions CO5: Be able to develop behavioural skills and humanitarian approach while communicating with patients, relatives, society and co- professionals, to promote individual and community health. CO6: To design the physiotherapy protocol for various neurological conditions.	
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.	
8	Outline syllabus		CO Mapping
	Unit 1	**Neurological Assessment**	

	A	Materials, Chief complaints, History taking–Present, Past medical, family ,personal history ,Observation ,Palpation, Higher mental function Consciousness, Orientation, Wakefulness, memory, Speech, Reading, Language, Writing,Calculations,Perception,Leftrightconfusion,Reasoning,andJudgment	CO1, CO2
	B	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. Differential diagnosis.	CO1,CO2
	Unit 2	**Neurophysiological Techniques**	
	A	Concepts, Principles, Techniques ,Effects of following Neurophysiological techniques: NDT ,PNF, Vojta therapy	CO1, CO3, CO6
	B	Rood's Sensorimotor Approach, Sensory Integration Approach, Brunnstorm's movement therapy, Motor relearning Programme.	CO1, CO3, CO6
	C	Contemporary task oriented approach, Muscle re-education approach and Constraint induced movement therapy.	CO1, CO3
	Unit 3	**Paediatric Neurology**	
	A	Developmental milestones, developmental reflexes, Neuro developmental screening tests. Evaluation &Management- History, Observation, Palpation, Milestone Examination developmental reflex Examination ,Higher mental function, Cranial nerve examination	CO2, CO4, CO6
	B	Motor& Sensory examination, Reflex testing, differentialDiagnosis, Balance and Coordination examination, Gaitanalysis, Functional analysis, List of Problems & Complications, short &Long Term goals	CO2, CO4, CO6
	C	Management of systemic complications, Management of Mechanical Complications	CO2,CO4
	Unit 4	**Evaluation and Management**	

	A	Brain and Spinal Cord Disorders: History, Observation, Palpation, Higher mental function, Cranial nerve examination ,Motor and Sensory examination, Reflex testing, differential diagnosis, Balance and Coordination examination ,Gait analysis, Functional analysis, List of Problems and Complications, short and Long Term goals, Management of systemic complications ,Management of Mechanical Complications, Use of various Neuro physiological approaches and Modalities in Cerebrovascular Accident ,Meningitis, Encephalitis ,Head Injury, Brain Tumors , Perceptual disorders , Amyotrophic lateral sclerosis, and Multiple sclerosis.	CO1, CO4, CO6
	B	Cerebellar, Spinal Cord and Muscle Disorders : History, Observation ,Palpation ,Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance &Coordination examination, Gait analysis, Functional analysis ,List of Problems & Complications, short &Long Term goals, Management of systemic complications, Management of Mechanical Complications, Use of various Neuro physiological approaches & Modalities in Ataxia, Sensory Ataxia, Parkinson's disease ,Muscular dystrophy(DMD),Myasthenia Gravis, Eaton-Lambert	CO1, CO4, CO6
		Syndrome ,Spinal tumors, Spinal cord injury, Transverse myelitis, Bladder & Bowel Dysfunction, Spinal muscular atrophies, Poliomyelitis, Post-Polio Syndrome.	
	C	Peripheral Nerve Injuries and Disorders :History, Observation, Palpation ,Motor & Sensory examination, Reflex testing, differential Diagnosis, Balance & Coordination examination, Functional analysis, List of Problems &Complications, short &Long Termgoals, Management of systemic complications, Management of Mechanical Complications, Use of various Neuro physiological approaches &Modalities in Hereditary motor sensory neuropathy, Gullain- Barre syndrome ,Brachial plexus palsy ,Thoracic outlet syndrome , Lumbo sacral plexus lesions, Phrenic& intercostals nerve lesions, Median nerve palsy, Ulnar nerve palsy, Radial nerve palsy , Musculocutaneous nerve palsy, Anterior &Posterior interosseous nerve palsy, Axillary nerve palsy ,Long thoracic nerve palsy, ,sciatic nerve palsy ,Tibial nerve palsy, Common peroneal nerve palsy, Femoral nerve palsy, Obturator nerve palsy, and Pudendal nerve palsy. Assessment and management of Neurological gaits : Quantitative and Qualitative (Kinetic& Kinematics) analysis ,List of Problems ,short & Long Term goals ,Management of following	CO1, CO4, CO6

		Neurological Gaits-Hemiplegic gait, Parkinson gait, High step gait, Hyper kinetic gait, Hypo kinetic gait, Waddling gait, Scissoring gait, Spastic gait, Choriform Gait, Diplegic Gait, and Myopathic Gait.			
	Unit 5	**Surgical management**			
	A	Pre and post-surgical assessment and treatment following conditions-Spinal disc herniation, Spinal stenosis, Spinal cord trauma, and Spina bifida, Tumors of the spine, Spinal cord and peripheral nerves.			CO3, CO4, CO6
	B	,Head trauma, Brain tumors, Cerebral aneurysms, Subarachnoid haemorrhages, epilepsy, Parkinson's disease, Chorea, Hemiballism,			CO3, CO4, CO6
	C	Psychiatric disorders, Malformations of the nervous system, Carotid artery stenosis, Arterio venous malformations			CO3, CO4, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Cash's textbook of neurology for, physiotherapists - Dowani - J P Brothers. 2. Adult Hemiplegia - Evaluation & treatment - Bobath - Oxford Butterworth Heinm an 3. Neurological Rehabilitation - Carr& Shepherd – Butterworth Heinrnan 4. Tetraplegia and paraplegia - A guide for physiotherapist- Bromley Churchill Livingstone. 5. Neurological physiotherapy - A, Problem solving approach – Susan Edwards- Churchill Linvig stone. 6. Neurological Rehabilitation - Urmpherd - Mosby. 7. Geriatric physical therapy- Gucciona- Mosby			

	Other References	1. Motor assessment of Developing Infant - Piper &Darrah - W B. Saunders. 2. Pediatric phySical therapy- Teckling Lippincott 3. Treatment of cerebral Palsy and motor Delay - Levitts- Blackwell Scientific Publications, London. 4. Aging the Health care Challenge - Levis- FA Davis. 5. Physiotherapy in Pediatrics - Shepherd - Butterworth Heinrnan	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO 1	PSO2	PSO3
CO1	3	2	1	1	2	3	3	2	1	2	3	3	2	3
CO2	3	3	3	2	2	2	2	3	1	3	3	2	3	2
CO3	3	1	3	2	3	2	3	1	3	2	1	3	2	3
CO4	2	3	3	2	3	3	2	3	3	2	3	3	3	3
CO5	3	2	1	3	2	3	1	3	2	1	3	3	2	3
CO6	2	1	3	1	1	1	3	2	2	3	2	2	3	2
Average PO's	**2.66**	**2**	**2.33**	**1.83**	**2.16**	**2.33**	**2.3**	**2.33**	**2**	**2.16**	**2.5**	2.66	2.5	2.66

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course code	PTB 403	
2	Course Title	Physiotherapy In General Medicine & Surgery	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	CC	
5	Course Objective	Acquire the knowledge of various conditions where physiotherapy plays a vital role in the rehabilitation	
6	Course Outcomes	The student will be able: CO1: To understand pathophysiological changes in infectious and metabolic disorders with their PT treatment CO2: To understand pathophysiological changes in respiratory and cardiovascular disorders with their PT treatment CO3: To understand pathophysiological changes in burn and oncology with their PT treatment	
		CO4: Diagnose condition from history taking, clinical evaluation and investigation in patients with skin disorders and wound. CO5: To understand various injuries with its treatment Protocol. CO6: To design the physiotherapy protocol for various surgical conditions.	
7	Course Description	Acquire knowledge of rational of basic investigative approaches in the medical system and surgical intervention.	
8	Outline syllabus		CO Mapping
	Unit 1	**Rehabilitation of:**	
	A	Physiotherapy in mother and child care	CO1, CO2
	B	Geriatrics	CO1, CO2
	C	Paediatric conditions – ASD, VSD, RHD	CO1, CO2, CO6
	Unit 2	**Rehabilitation of:**	
	A	Physiotherapy in pre and post-operative stages	CO2, CO3
	B	Operations on upper G.I.T.-esophagus, stomach, duodenum, Operations on large and small intestine	CO2, CO3
	C	Endocrine disorders – thyroid, adrenal	CO2, CO3
	Unit 3	**Rehabilitation of:**	

	A	Burns and its treatment, plastic surgery			CO3, CO5, CO6
	B	Management of wound and ulcers			CO3, CO5, CO6
	C	PT intervention in Oncology			CO3, CO5
	Unit 4	**Rehabilitation of:**			
	A	Skin conditions			CO4, CO5
	B	U.V.R therapy in various skin conditions			CO4, CO5, CO6
	C	Vitiligo; Hair loss; Pigmentation			CO4, CO5, CO6
	Unit 5	**Rehabilitation of:**			
	A	Sinusitis, non-suppurative and chronic suppurative otitis media			CO4, CO5, CO6
	B	Labrynthitis, Mastoidectomy, Chronic rhinitis, Laryngectomy, Pharyngeo–laryngectomy			CO4, CO5
	C	Facial palsy			CO4, CO5, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	CE	ETE	
		25%	25%	50%	
	Text book/s*	1. Tidy's physiotherapy 2. Neurological Rehabilitation – Carr & Shepherd – Butterworth Heinrnan 3. Clinical Orthopedic rehabilitation- Brotzman			
	Other References	1. Aging the Health care Challenge - Levis- FA Davis.			

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	2	3	3
CO2	2	2	3	3	3	3	3	3	3	2	2	3	3	3
CO3	2	3	1	1	3	2	3	3	1	3	3	3	3	3
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	3
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	2.33	2.33	2.33	2.16	2.66	2.5	2.5	2.33	2.33	2.33	2	**2.83**	**2.83**	**3**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	**PTB 405**	
2	Course Title	**Occupational Health**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	DSC	
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 methods to prevent occupation related diseases. 3. To plan treatment goals and apply the skills gained in rehabilitating and restoring functions.	
6	Course Outcomes	CO1: To Understand the concepts of occupational health and disease. CO2: To Explain the concept of physical, chemical and biological agent related Hazard CO3: To Acquire the knowledge of disease related to physical, chemical, biological related agents in occupational health. CO4: To understand the protective measures related to occupational Health. CO5: To Summarize the knowledge of prevention of occupational diseases. CO6: To be able to create a healthy occupational environment.	
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.	
8	Outline syllabus		CO Mapping
	Unit 1	**General Introduction**	
	A	Occupational Health and Hazards, Health of the worker	CO1
	B	Occupational Environment Hazards, types of Environment Hazard	CO1
	C	Role of ergonomics in prevention of occupational hazards. Injuries due to ergonomics alteration & ergonomic evaluation of workplace	CO1,CO6
	Unit 2	**Occupational Hazards**	
	A	Accidents due to: Physicalagents: e.g. heat/cold, light, noise, vibration, UVR. Ionizing radiation. Chemical agents: inhalation, local action & ingestion.	CO2, CO3
	B	Mechanical hazards: overuse/fatigue injuries due to ergonomic alteration & ergonomic evaluation of work place-mechanical stresses per hierarchy- sedentary table work–executives, clerk, inappropriate seating arrangement- vehicle drivers, constant standing- watchman-Defense forces, surgeons, Over-exertion in laborers,-common accidents –Role management	CO2, CO3, CO6

	C	Psychological hazards Biological Hazards			CO2, CO3
	Unit 3	**Occupational Diseases**			
	A	Diseases due to Physical Agents, Diseases due to Chemical Agents.			CO3, CO6
	B	Diseases due to Biological agents, Occupational Cancers.			CO3, CO6
	C	Occupational Dermatosis, Diseases of Psychological origin			CO3, CO6
	Unit 4	**Measures for Health Protection of Workers**			
	A	Nutrition, Communicable Diseases control			CO3, CO4, CO6
	B	Environmental Sanitation: water, food, toilet, general plant cleanliness, sufficient space, Lighting, ventilation, temperature, protection against hazards, housing.			CO3, CO4, CO6
	C	Mental health, Health Education, Family planning.			CO3, CO4, CO6
	Unit 5	**Prevention of Occupational Diseases**			
	A	Medical Measures: Pre- placement examination, Periodical Examination, Medical and Health Care Services, Supervision of working environment, Maintenance and analysis of records, Health education and counselling.			CO5, CO6
	B	Engineering Measures: Design of building, Good house-keeping, General Ventilation, Mechanization, Substitution, Dusts, Enclosure, Isolation, Local Exhaust Ventilation, Protective Devices, Environmental Monitoring			CO5, CO6
	C	Legislation: The Factories Act, 1948			CO5, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. K Park, Text Book of Preventive and Social medicine 2. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher 3. Glenda Key, Industrial Therapy, Mosby			
	Other References	1. Mural K F, Ergonomics Man in his working environment 2. Nordin Andersons Pope, Musculoskeletal Disorders in workplace- Principle & Practice, Mosby Elsevier 3. Juia Smedley, Oxford Handbook of Occupational Health			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	3	1	1	3	1	3	3	3
CO2	2	2	3	3	1	2	1	2	3	2	3	2	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO4	3	1	2	2	2	1	2	2	2	1	2	3	2	2
CO5	3	3	2	3	3	3	3	3	3	3	3	3	3	2
CO6	1	2	1	1	3	2	3	1	2	2	3	3	2	2
Average PO's	2.33	2.33	2.33	2.33	2.33	2.33	2.5	2	2.33	2.33	2.5	2.66	2.5	2.5

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 404	
2	Course Title	**COMPLEMENTARY MEDICINE**	
3	Credits	1	
4	Contact Hours (L-T-P)	1-0-0	
	Course Type	Theory	
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. CO6: To be able to compile the rationale, approach or methodology, outcomes and conclusions.	
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	INTRODUCTION TO RECENT TRENDS	
	A	Brief.	CO1, CO2
	B	Demonstration.	CO1, CO2
	C	Experimentation.	CO1, CO2
	Unit 2	RECENT TRENDS IN DRY NEEDLING	
	A	Brief.	CO2, C03, CO6
	B	Demonstration.	CO2, C03, CO6
	C	Experimentation.	CO2, C03, CO6
	Unit 3	RECENT TRENDS IN THERAPEUTIC TAPING	
	A	Brief	CO3, C04

	B	Demonstration			CO3, C04
	C	able to utilize modalities			CO3, C04
	Unit 4	RECENT TRENDS IN ELECTROTHERAPY			
	A	Brief			CO4, CO5
	B	Demonstration			CO4, CO5
	C	application			CO4, CO5
	Unit 5	RECENT TRENDS IN SPORTS MEDICINE			
	A	Brief			CO1, CO6
	B	Demonstration			CO1, CO6
	C	Assessment and application			CO1, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. K Park, Text Book of Preventive and Social medicine 2. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher 3. Glenda Key, Industrial Therapy, Mosby			
	Other References	1. Mural K F, Ergonomics Man in his working environment 2. Nordin Andersons Pope, Musculoskeletal Disorders in workplace- Principle & Practice, Mosby Elsevier 3. Puia Smedley, Oxford Handbook of Occupational Health			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	1	2	3	3	2	3	1	3	3	2
CO2	3	2	3	2	3	1	3	2	3	1	3	2	2	3
CO.3	3	3	1	2	1	3	1	3	1	2	3	2	3	3
CO4	1	2	3	3	3	2	2	2	3	3	3	3	1	3
CO5	2	3	3	1	3	2	3	3	3	3	2	3	3	1
CO6	2	2	1	3	3	1	3	2	1	3	3	1	3	2
Average POs	**2.166**	**2.5**	**2.16**	**2.33**	**2.33**	**1.83**	**2.5**	**2.5**	**2.16**	**2.5**	**2.5**	**2.33**	**2.5**	**2.33**

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

PRACTICAL

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 431	
2	Course Title	Physiotherapy in Orthopedics & sports (Practical)	
3	Credits	1	
4	Contact Hours (P)	0-0-2	
	Course Type	Compulsory	
5	Course Objective	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify disabilities due to musculoskeletal dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore musculoskeletal function.	
6	Course Outcomes	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. CO6: To design a physiotherapy protocol for various orthopaedic 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	**General assessment and physiotherapyTreatment**	
	A	Assessment & Diagnosis	CO1, CO2
	B	Inflammatory conditions	CO4, CO6
	C	Degenerative Conditions	CO5, CO6
	Unit 2	**Regional Physiotherapy assessment and treatment**	
	A	Upper limb conditions	CO2, CO4, CO6
	B	Lower limb Conditions	CO3, CO6
	C	Spinal Conditions	CO3, CO6
	Unit 3	**Physiotherapy for Traumatic conditions & Orthopaedic surgery**	CO3, CO4
	A	Orthopaedic Surgeries, Amputation	CO3, CO4
	B	Fractures – Introduction, types, stages of healing, Upper limb Fractures	CO5, CO6

	C	Lower limb and spinal fractures			CO4, CO5
	Unit 4	**Physiotherapy for Deformities and Disorders**			
	A	Deformities – Congenital and Acquired.			CO5, CO1, CO6
	B	Upper limb, lower limb and spinal disorders			CO5, CO1, CO6
	C	Bone and joint diseases			CO5, CO1, CO6
	Unit 5	**Physiotherapy in Pathology and conditions**			
	A	Cerebral palsy, Leprosy,			CO1, CO4, CO6
	B	Poliomyelitis			CO1, CO4, CO6
	C	Skeletal Tumours			CO1, CO4, CO6
	Mode of examination	Practical			
	Weightage Distribution	CA	ETE		
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	3	3	2
CO2	2	2	3	3	3	3	3	3	3	2	2	2	2	3
CO3	2	3	1	1	3	2	3	3	1	3	3	2	3	2
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	2
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2.33**	**2.16**	**2.66**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2**	**2.66**	**2.66**	**2.5**

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 432	
2	Course Title	**Physiotherapy in Neurology & Neurosurgery (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. CO5: Be able to develop behavioural skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health. CO6: To design the physiotherapy protocol for various neurological conditions.	
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.	
8	Outline syllabus		CO Mapping
	Unit 1	**NEUROLOGICAL ASSESSMENT**	
		1. Brief 2. Demonstration.	CO1, CO2

		3. Assessment tools & scales.	
	Unit 2	**NEURO PHYSIOLOGICAL TECHNIQUES**	
		1. Rood's Sensory motor approach 2. NDT 3. Brunnstrom Motor Therapy 4. Motor Re-learning Programme.	CO1, CO3
	Unit 3	**Paediatric Neurology**	
		1. Brief about paediatric assessment. 2. Examination 3. Management	CO2, CO4, CO6
	Unit 4	**Evaluation & Management**	
		1. Brief about assessment in neurological conditions. 2. Cranial nerve examination, motor and sensory examination. 3. Management of neurological conditions.	CO1, CO4, CO6
	Unit 5	**NEUROLOGICAL GAITS & APPLIED YOGA IN NEUROLOGICAL CONDITIONS**	
		1. Quantitative & qualitative analysis of gait. 2. Pre & post-surgical assessment and treatment of neurological conditions. 3. Applied yoga in neurological conditions.	CO3, CO4, CO6
	Mode of examination	Practical/Viva	
	Weightage Distribution	CA: 25% / ETE: 25% / 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	1. Motor assessment of Developing Infant - Piper &Darrah - W B. Saunders. 2. Pediatric phySical therapy- Teckling Lippincott 3. Treatment of cerebral Palsy and motor Delay - Levitts-	
		Blackwell Scientific Publications, London. 4. Aging the Health care Challenge - Levis- FA Davis. 5. Physiotherapy in Pediatrics - Shepherd - Butterworth Heinrnan	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO 1	PSO2	PSO3
CO1	3	2	1	1	2	3	3	2	1	2	3	3	2	3
CO2	3	3	3	2	2	2	2	3	1	3	3	2	3	2
CO3	3	1	3	2	3	2	3	1	3	2	1	3	2	3
CO4	2	3	3	2	3	3	2	3	3	2	3	3	3	3
CO5	3	2	1	3	2	3	1	3	2	1	3	3	2	3
CO6	2	1	3	1	1	1	3	2	2	3	2	2	3	2
Average PO's	**2.66**	**2**	**2.33**	**1.83**	**2.16**	**2.33**	**2.3**	**2.33**	**2**	**2.16**	**2.5**	2.66	2.5	2.66

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 433	
2	Course Title	Physiotherapy in General Medicine & Surgery	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Type	CC	
5	Course Objective	Acquire the knowledge of evaluation and physiotherapeutic treatment for geriatric & paediatric conditions Acquire the knowledge of various conditions where physiotherapy plays a vital role in the rehabilitation	
6	Course Outcomes	The student will be able to: CO1 : To understand pathophysiology of infectious and metabolic disorders with their PT treatment CO2 : To understand pathophysiological changes in respiratory and cardiovascular disorders with their PT treatment CO3 : To understand pathophysiological changes in burn and oncology with their PT treatment CO4: Diagnose condition from history taking, clinical evaluation and investigation in patients with skin disorders and wound. CO5: To understand various injuries with its treatment Protocol CO6: To design the physiotherapy protocol for various surgical conditions.	
7	Course Description	To Identify discuss and analyse cardiovascular and pulmonary dysfunction. Acquire knowledge of rational of basic investigative approaches in the medical system and surgical intervention.	
8	Outline syllabus		CO Mapping
	Unit 1	Demonstration of rehabilitation of	
	A	Geriatrics	CO1, CO2
	B	Paediatric conditions – ASD, VSD	CO1, CO2, CO6
	C	RHD	CO1, CO2
	Unit 2	Demonstration of rehabilitation of	
	A	Physiotherapy in pre and post-operative stages	CO2, CO3, CO6

	B	Operations on upper G.I.T.-esophagus, stomach, duodenum, Operations on large and small intestine	CO2, CO3, CO6
	C	Endocrine disorders – thyroid, adrenal	CO2, CO3
	Unit 3	Demonstration of rehabilitation of	
	A	Burns and its treatment, plastic surgery	, CO5,
	B	Management of wound and ulcers	CO5, CO6
	C	PT intervention in Oncology	CO3, CO5
	Unit 4	Demonstration of rehabilitation of	
	A	Skin conditions	CO5,CO6
	B	U.V.R therapy in various skin conditions	CO4, CO5,
	C	Vitiligo; Hair loss; Pigmentation	CO4, CO5
	Unit 5	Demonstration of rehabilitation of	
	A	Sinusitis, non-suppurative and chronic suppurative otitis media	CO4, CO5
	B	labrynthitis, mastoidectomy, chronicrhinitis, laryngectomy, pharyngeo–laryngectomy	CO4, CO5, CO6
	C	Facial palsy	CO4, CO5,
	Mode of examination	Practical	
	Weightage Distribution	CA: 25% / ETE: 25% / 75%	
	Text book/s*	1. Tidy's physiotherapy 2. Neurological Rehabilitation - Carr&Shepherd – ButterworthHeinrnan Clinical orthopedic rehabilitation- Brotzman	
	Other References	4. Aging the Health care Challenge - Levis- FA Davis.	

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO 1	PSO2	PSO3
CO1	3	3	2	2	2	3	3	1	3	3	1	2	3	3
CO2	2	2	3	3	3	3	3	3	3	2	2	3	3	3
CO3	2	3	1	1	3	2	3	3	1	3	3	3	3	3
CO4	3	1	2	3	3	3	1	3	3	3	1	3	3	3
CO5	3	3	3	1	3	3	3	1	3	1	2	3	3	3
CO6	1	2	3	3	2	1	2	3	1	2	3	3	2	3
Average PO's	2.33	2.33	2.33	2.16	2.66	2.5	2.5	2.33	2.33	2.33	2	**2.83**	**2.83**	**3**

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

School: SSAHS		**Batch : 2023-27**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	**PTB 434**	
2	Course Title	**Occupational Health (Practical)**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Status	DSC	
5	Course Objective	1. Students will be able apply knowledge in community medicine and other areas withskills to apply these in clinical situation. 2. Students will be able to identify methods to prevent occupation related diseases. 3. To plan treatment goals and apply the skills gained in rehabilitating and restoring functions.	
6	Course Outcomes	CO1: Understanding the concepts of occupational health and disease. CO2: Explaining the concept of physical, chemical and biological agent related Hazard. CO3: To Acquire the knowledge of disease related to physical, chemical, biological related agents in occupational health. CO4: To understand the protective measures related to occupational Health. CO5: Summarizing the knowledge of prevention of occupational diseases. CO6: To be able to create a healthy occupational environment	
7	Course Description	The subject serves to integrate the knowledge gained by the students in communitymedicine and other areas with skills to apply these in clinical situations of health and disease and its prevention. The objective of the course isthat after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions and plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions	
8	Outline syllabus		CO Mapping
	Unit 1	**General Introduction**	CO1
		1. Brief 2. Demonstration. 3. Identification	
	Unit 2	**Occupational Hazards**	CO2, CO6
		1. -Brief 2. -Institutional visit to PMR department 3. -Demonstration	
	Unit 3	**Occupational Diseases**	CO3, CO6
		1. Brief 2. -Demonstration 3. -Community visit	

	Unit 4	**Measures for Health Protection of Workers**		CO3, CO4
		1. -brief 2. -in rural areas to conduct survey of populationrequiring physiotherapy services & treatments. 3. -demonstration		
	Unit 5	**Prevention of Occupational Diseases**		CO5, CO6
		1. -brief 2. -Demonstration. 3. -Identification		
	Mode of examination	Practical/Viva		
	Weightage Distribution	CA	ETE	
		25%	75%	
	Text book/s*	1. K Park, Text Book of Preventive and Social medicine 2. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher 3. Glenda Key, Industrial Therapy, Mosby		
	Other References	1. Mural K F, Ergonomics Man in his working environment 2. Nordin Andersons Pope, Musculoskeletal Disorders in workplace- Principle & Practice, Mosby Elsevier 3. Juia Smedley, Oxford Handbook of Occupational Health		

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	3	3	1	1	3	1	3	3	3
CO2	2	2	3	3	1	2	1	2	3	2	3	2	2	3
CO3	2	3	3	3	3	3	3	3	3	3	3	2	3	3
CO4	3	1	2	2	2	1	2	2	2	1	2	3	2	2
CO5	3	3	2	3	3	3	3	3	3	3	3	3	3	2
CO6	1	2	1	1	3	2	3	1	2	2	3	3	2	2
Average PO's	2.33	2.33	2.33	2.33	2.33	2.33	2.5	2	2.33	2.33	2.5	2.66	2.5	2.5

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

School: SSAHS		**Batch : 2023-27**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 435	
2	Course Title	Complementary Medicine	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	PRACTICAL	
5	Course Objective	Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.	
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. CO6: To be able to compile the rationale, approach or methodology, outcomes and conclusions.	
7	Course Description	Enable student to develop and apply clinical knowledge for assessment, treatment of the patient. Explore relevant intellectual approaches and practical skills, including those acquired in the taught components, to the chosen topics.	
8	Outline syllabus		CO Mapping
	Unit 1	INTRODUCTION TO RECENT TRENDS	
	A	Brief.	CO1, CO2
	B	Demonstration.	CO1, CO2
	C	Experimentation.	CO1, CO2
	Unit 2	RECENT TRENDS IN DRY NEEDLING	
	A	Brief.	CO2, C03, CO6
	B	Demonstration.	CO2, C03, CO6
	C	Experimentation.	CO2, C03,

	Unit 3	RECENT TRENDS IN THERAPEUTIC TAPING			
	A	Brief *Intro*			CO3, C04
	B	Demonstration of modalities			CO3, C04, CO6
	C	Procedural ablility to utilize modalities			CO3, C04, CO6
	Unit 4	RECENT TRENDS IN ELECTROTHERAPY			
	A	Brief			CO4, CO5
	B	Demonstration			CO4, CO5
	C	application			CO4, CO5
	Unit 5	RECENT TRENDS IN SPORTS MEDICINE			
	A	Brief			CO1, CO5, CO6
	B	Demonstration			CO1, CO5, CO6
	C	Assessment and application			CO1, CO5, CO6
	Mode of examination	Theory			
	Weightage Distribution	CA	ETE		
		25%	25%	50%	
	Text book/s*	1. K Park, Text Book of Preventive and Social medicine 2. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher Glenda Key, Industrial Therapy, Mosby			
	Other References	1. Mural K F, Ergonomics Man in his working environment 2. Nordin Andersons Pope, Musculoskeletal Disorders in workplace-Principle & Practice, Mosby Elsevier			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	1	2	3	3	2	3	1	3	3	2
CO2	3	2	3	2	3	1	3	2	3	1	3	2	2	3
CO.3	3	3	1	2	1	3	1	3	1	2	3	2	3	3
CO4	1	2	3	3	3	2	2	2	3	3	3	3	1	3
CO5	2	3	3	1	3	2	3	3	3	3	2	3	3	1
CO6	2	2	1	3	3	1	3	2	1	3	3	1	3	2
Average POs	**2.166**	**2.5**	**2.16**	**2.33**	**2.33**	**1.83**	**2.5**	**2.5**	**2.16**	**2.5**	**2.5**	**2.33**	**2.5**	**2.33**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 436	
2	Course Title	Clinical Reasoning – I (CT)	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	1- To perform effective consultations using clinical reasoning. 2- To develop professional practice using clinical reasoning.	
6	Course Outcomes	CO1: To understand & perform clinical reasoning (CR). CO2: To perform hypothetico-deductive CR. CO3: To demonstrate pattern formation CR. CO4: To demonstrate therapist interactions. CO5: To demonstrate mastery of clinical reasoning. CO6: To compile the clinical reasonings for development & planning of further assessment.	
7	Course Description	Clinical reasoning in clinical settings represents a written mode of consultation & communication for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively.	
8	Outline syllabus		CO Mapping
	Unit 1	**Clinical Reasoning Approaches**	
	A	Introduction	CO1, CO2
	B	Framework in different areas of PT	CO1, CO2
	C	Cases	CO1, CO2
	Unit 2	**Hypotheticao- deductive method**	
	A	Introduction	CO1, CO3, CO6
	B	Constructing and de-constructing hypotheses	CO1, CO3, CO6
	C	Cases	CO1, CO3, CO6
	Unit 3	**Pattern formation**	
	A	Introduction	CO1, CO3, CO6
	B	Patterns of common presentation in PT	CO1, CO3, CO6
	C	Cases	CO1, CO3

	Unit 4	**Patient therapist interaction and decision making**			
	A	Patient preferences			CO2, CO4
	B	Clinical judgement and approaches.			CO2, CO4
	C	Cases			CO2, CO4
	Unit 5	**Clinical reasoning outcome**			
	A	PT goal planning			CO1, CO5, CO6
	B	PT milestones			CO1,CO5, CO6
	C	Cases			CO1,CO5, CO6
	Mode of examination	Clinical examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) 3. Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 4. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. 5. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf 2. http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol. pdF			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	3	2	3	3	2	3	2	3	3	2	3	3	2
CO2	3	2	3	2	3	3	2	3	3	1	3	3	2	3
CO3	2	3	3	1	2	2	3	3	2	3	3	2	3	3
CO4	3	2	1	3	3	3	2	1	3	2	2	3	3	3
CO5	1	3	3	3	2	3	2	3	1	3	3	3	3	3
CO6	2	3	2	3	1	3	1	2	3	3	2	1	1	2
Average Pos	**2.33**	**2.66**	**2.33**	**2.5**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.6667**

School: SSAHS		**Batch : 2023-27**	
Programme: BPT			
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 437	
2	Course Title	Clinical Skills – I (CT)	
3	Credits	**2**	
4	Contact Hours(L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	1- To perform & demonstrate basic clinical skills. 2- To perform & demonstrate advanced clinical skills.	
6	Course Outcomes	CO1:To demonstrate & perform clinical skills in OPD. CO2: To demonstrate & perform clinical skills in ICU CO3: To demonstrate Clinical skills in community PT. CO4: To demonstrate lifelong learning for clinical skills. CO5: To demonstrate mastery of clinical Skills. CO6: To design physiotherapy protocol in cluding al the clinical skills.	
7	Course Description	Clinical skills in PT settings represents a mode of treatment for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively.	
8	Outline syllabus		CO Mapping
	Unit 1	**Basic PT Clinical Skills in podiatry.**	
	A	Different foot conditions and assessment.	CO1, CO2
	B	PT skills	CO1, CO2
	C	Cases	CO1, CO2
	Unit 2	**Basic PT Clinical Skills in hand rehab.**	
	A	Different hand conditions	CO1, CO3,
	B	PT skills	CO1, CO3
	C	Cases	CO1, CO3
	Unit 3	**Basic PT Clinical Skills in geriatric community cases.**	
	A	Different geriatric conditions	CO1, CO3
	B	PT Skills	CO1, CO3
	C	Cases	CO1, CO3
	Unit 4	**Basic PT Clinical Skills in ventilated cases.**	
	A	Different types of MV	CO2, CO4, CO6
	B	PT Skills	CO2, CO4, CO6
	C	Cases	CO2, CO4, CO6

	Unit 5	**Basic PT Clinical Skills in pediatric cases.**			
	A	Different pediatric conditions			CO1, CO5, CO6
	B	PT Skills			CO1, CO5, CO6
	C	Cases			CO1, CO5, CO6
	Mode of examination	Clinical examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 3. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.p df			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	3	2	3	3	2	2	3	2	2	2	2
CO2	2	2	2	1	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	2	2	2	1	2	3	3	2	3	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	2	3	3
CO6	2	3	2	3	3	2	3	1	2	3	2	1	1	2
Average Pos	**2.16**	**2.16**	**2.33**	**2.33**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7th Semester**	
1	Course Code	PTB 438	
2	Course Title	Clinical Documentation – I (CT)	
3	Credits	**2**	
4	Contact Hours(L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	To enable the students to document various aspects of proper History taking, assessment, differential diagnosis and plan of treatment. Referrals & follow up of patients undergoing physiotherapy from various departments of the domain of health and allied sciences. To master these skills among learners and review their application constantly.	
6	Course Outcomes	CO1:To perform history taking documentation. CO2: To perform SOAP documentation. CO3: To demonstrate referrals documentation. CO4: To demonstrate follow up documentation CO5: To demonstrate mastery of clinical documentation CO6: To compile the documentations for further planning of treatment	
7	Course Description	Documentation in clinical settings represents a written mode of communication for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively	
8	Outline syllabus		CO Mapping
	Unit 1	**Formats of Assessment**	
	A	General Assessment	CO1, CO2
	B	Physiotherapy Assessment	CO1, CO2, CO6
	C	Functional Assessment	CO1, CO2, CO6
	Unit 2	**SOAP format**	
	A	Subjective Assessment	CO1, CO3, CO6
	B	Objective Assessment	CO1, CO3, CO6
	C	Assessment leading to Goal Planning	CO1, CO3, CO6
	Unit 3	**POMR Format**	

	A	Patients oriented problem list			CO1,CO3
	B	Investigations record			CO1,CO3
	C	Temporal Variations			CO1,CO3
	Unit 4	**Referrals**			
	A	To the PT department			CO2, CO4
	B	From the PT department			CO2, CO4
	C	Documentation of the referrals			CO2, CO4
	Unit 5	**Outcome measures and follow-up**			
	A	6 Minute Walk test, UPDRS			CO1, CO5, CO6
	B	BBS, MMSE, GMFCS,			CO1, CO5, CO6
	C	Pea Body Scale, BAILEY scale of infant development, NBAS, PASE (Physical activity scale for the elderly).			CO1, CO5, CO6
	Mode of examination	Practical			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds)			
		3. Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 4. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. 5. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf 2. http://www.framinghamheartstudy.org/share/protocols/bmd1_7s _ protocol.pdf			

POs Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	1	3	3	2	3	3	2	2	3	2	2	2	2
CO2	2	2	2	1	3	3	3	3	3	2	3	3	3	3
CO3	3	3	3	2	3	2	2	3	3	3	1	3	3	3
CO4	2	2	1	2	2	2	1	2	3	3	2	3	3	2
CO5	1	2	3	3	2	3	2	3	1	2	3	2	3	3
CO6	2	3	2	3	3	2	3	1	2	3	2	1	1	2
Average Pos	**2.16**	**2.16**	**2.33**	**2.33**	**2.5**	**2.5**	**2.33**	**2.33**	**2.33**	**2.66**	**2.16**	**2.33**	**2.5**	**2.5**

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

Eighth Semester

School: SSAHS		**Batch : 2023-27**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	**PTB 411**	
2	Course Title	Physiotherapy in Cardio-Pulmonary Scienecs Including Lymphatic System	
3	Credits	**3**	
4	Contact Hours(L-T-P)	**3-0-0**	
	Course Type	Compulsory	
5	Course Objective	1. To provide knowledge in assessing and planning physiotherapy interventions forvarious General, Medical and Surgical conditions. 2. The student must be able to reassess the patient as necessary,to monitorthe patient in regard to treatment, to monitor the patient's vital signs. 3. Student must know emergency drugs indication and contra-indication, care inintensive care unit (ICU) and to provide appropriate interventions to the patient	
6	Course Outcomes	CO1: Remembering the etiology, pathology, clinical features and medical or surgical Management of various diseases/disorders affecting the cardiac and vascular conditions. CO2: Understanding the basic concepts of assessment/ diagnostic tests of various cardiovascular diseases/disorders. CO3: understanding the surgical procedures, their complications and management of cardiovascular conditions CO4: Applying the principles of physiotherapy management in planning a comprehensive Cardiovascular rehabilitation Programme. CO5: Evaluating the available treatment techniques and evidence ased practice for Physiotherapy management of cardiovascular conditions. CO6: To Compile and formulate available treatment techniques and evidence ased practice for Physiotherapy management of cardiovascular conditions	
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 toprovide appropriate interventions to the patient	
8	Outline syllabus		CO Mapping
	Unit 1	**ASSESSMENT AND INVESTIGATIONS**	

	A	INTRODUCTION: Anatomical and Physiological differences between the Adult and Pediatric lung. Bedside assessment of the patient-Adult &Pediatric.	CO1, CO2, CO6
	B	Exercise tolerance Testing– Maximal and sub-maximal tests Radiographs, PFT, ABG, ECG, Biomarkers, Hematological and Biochemical Tests.	CO2, CO3,
	C	Outcome measures in pulmonary rehabilitation and Scales used in pulmonary rehabilitation (becks depression inventory (BDI) and Hamilton Anxiety Scale(HAS), MMSE, SGRQ, SF-36, Activities-specific balance scale Outcome measures in cardiac rehabilitation	CO4, CO6,
	Unit 2	**Physiotherapy Techniques**	
	A	Physiotherapy techniques to increase lung volume– Mobilization Body positioning, Breathing exercises, Neurophysiological Facilitation of respiration	CO4,CO5
	B	Mechanical aid –Incentive Spirometry Breathing control techniques Relaxation positions to relieve dyspnea	CO3, CO4
	C	**Physiotherapy techniques to clear secretions**– Hydration, Humidification, Nebulisation, Postural Drainage Manual techniques –Percussion, Vibration and Shaking, Rib Springing ACBT, Autogenic Drainage, Cough and Huff, Suctioning PEP devices	**CO4, CO5**
	Unit 3	**Cardiac-Pulmonary Rehabilitation**	
	A	Definition, Indications, Contraindications, Phases of Cardiac Rehabilitation and components of pulmonary rehabilitation	**CO5, CO6**
	B	Disease specific approaches in cardio-pulmonary rehabilitation (asthma, obesity related respiratory disorders, pulmonary hypertension, post-surgical patients, CABG) Assessment and Physiotherapy in Peripheral arterial disease	
	C	Drug therapy– Drugs to prevent and treat inflammation Drugs to treat Bronchospasm, Drugs to treat Breathlessness Drugs to help sputum clearance Drugs to inhibit coughing Drugs to improve ventilation Drugs to reduce pulmonary hypertension	**CO1,CO5**
	Unit 4	**Intensive Care Unit**	
	A	Introduction to ICU: ICU monitoring and Apparatus ~~Artificial Airways and Tubes used in the ICU~~	**CO3, CO4**

	B	Oxygen Therapy Non- Invasive ventilation (CPAP, BiPAP)			**CO4, CO5,**
	C	Indications, contraindications, Modes and weaning of mechanical ventilator			**CO5, CO6**
	Unit 5	**Neonatal and pediatric physiotherapy AND lymphatic System**			
	A	Neonatal Unit Chest physiotherapy for children Modifications of chest physiotherapy for specific neonatal disorders Emergencies in the neonatal unit.			**CO4, C O5**
	B	Evaluation of lymphedema Lymphatic massage Skin care and hygiene Techniques for Prevention and reduction of lymphedema			**CO1, CO3**
	C	Manual lymphatic drainage Faradism Under Pressure Intermittent/pneumatic Compression therapy Compression therapy			**CO1, CO2,CO5**
	Mode of examination	**Theory**			
	Weightage Distribution	CA 25	MTE 25	ETE 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	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	2	3	3
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	2
CO3	3	3	2	2	3	2	3	3	3	3	3	2	2	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	2
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	2
CO6	1	2	2	3	1	2	3	1	2	1	3	2	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.5**	**2.66**	**2.3**

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

School: SSAHS		**Batch: 2023-27**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 412
2	Course Title	Physiotherapy in Obstetrics and Gynecological Condition
3	Credits	2
4	Contact Hours (L-T-P)	2-0-0
	Course Type	DSC
5	Course Objective	The student will be able to Understand the importance of physiotherapy in obstetrics and gynaecology, the basic concepts of techniques, the importance of exercises and preventive measure in women health.
6	Course Outcomes	CO1 - understanding of the changing knowledge base in this clinical area CO2- Understand the impact of exercise on the altered physiology, pathophysiology and psychology of pregnancy, menopause, aging, & osteopenia / osteoporosis. CO3- Understand the motivational and marking aspect of leading community and hospital based exercise classes. CO4- Identify the legal and safety issue associated with leading exercise classes for women with specific physical need. CO5 - Plan, deliver and evaluate appropriate exercise Programmes for specific women's groups of the community. CO6: To compile the observations and findings for development and planning of various gynecological conditions
7	Course Description	In this course the student will learn the principles, technique, and effects of physiotherapy in various obstetrics and gynecological conditions.

8	Outline syllabus		CO Mapping
	Unit 1	**Physiotherapy assessment in obstetrics**	
	A	Antenatal assessment.	CO1,CO2
	B	Assessment during labour.	CO1,CO2
	C	Postnatal assessment.	CO1,CO2

	Unit 2	**Physiotherapy assessment in gynecology**	
	A	Physiotherapy Assessment of different gynecological condition.	CO1,CO2
	B	Pre & Post operative assessment of gynecological surgery.	CO1,CO2
	C	Physiotherapy assessment of Bladder and Bowel Dysfunction. Assessment includes: Pelvic floor muscle assessment. Assessment of pain. Diagnostic tools used in gynaecological assessment. Examination of breast cancer, Puberty & common syndrome during this phase. Polycystic ovarian syndrome.	CO1,CO2
	Unit 3	**Physiotherapy in obstetrics**	
	A	Antenatal exercise in pregnancy. Concept, principles and organization of antenatal exercises. PT management of common syndrome of pregnancy. Role of PT in antenatal complication.	CO3, CO6
	B	Ergonomics during childbearing phase. Role of physiotherapy in high risk pregnancy. Role of physiotherapy during Labor and Urinary in continence.	CO3, CO6
	C	C- Section, normal delivery care and post natal physiotherapy. PT management of immediate and late postnatal complications.	CO2, CO3
	Unit 4	**Physiotherapy in gynecology**	
	A	Exercise for an adolescent female.	CO2, CO6
	B	Principles and techniques of application of pelvic floor exercises. Use of electrotherapy modalities in training Pelvic floor muscles. Therapeutic electrical stimulation. & Biofeedback.	CO2, CO6
	C	Physiotherapy management in Pelvic floor dysfunction. Physiotherapy intervention before and after gynecological surgeries.	CO2, CO6
	Unit 5	**Other Women health related condition**	
	A	Prevention and Physiotherapy intervention in Osteoporosis and PCOD.	CO4,CO5
	B	Physiotherapy management of breast cancer, Lymph edema after mastectomy.	CO4, CO5, CO6

	C	Physiotherapy management of cervical cancer, uterine cancer, hysterectomy.			CO4, CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	Physiotherapy in Obstetrics and Gynaecology by Margaret Polden			
	Other References	Textbook of Physiotherapy for Obstetrics and Gynecological Conditions by GB Madhuri			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	3	2	1	3	3	2	1	3	3	2	1	2	3	3
C	3	1	3	3	1	3	2	2	2	3	2	3	3	2
O2	3	3	2	2	3	2	3	3	3	3	3	2	2	2
CO3	2	3	3	3	2	3	2	1	3	2	3	3	3	2
CO4	3	2	3	1	3	2	1	3	2	3	2	3	3	2
CO5	1	2	2	3	1	2	3	1	2	1	3	2	2	3
CO6												**2.5**	**2.66**	**2.3**

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

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 413
2	Course Title	Community Based Rehabilitation
3	Credits	**2**
4	Contact Hours (L-T-P)	**2-0-0**
	Course Type	CC
5	Course Objective	1. Students will be able apply knowledge in community medicine and other areas withskills to apply these in clinical situation. 2. Students will be able to identify rehabilitation methods to prevent disabilities anddysfunctions due to various disease conditions. 3. To plan treatment goals and apply the skills gained in rehabilitating and restoring functions.
6	Course Outcomes	CO1: Understanding the concepts and principles of Community BasedRehabilitation and general rehabilitation. CO2: Explaining the concept of disability, its evaluation, health and geriatric health, national healthcare Programmes and policies, NGOs. CO3: Practicing appropriate physiotherapy skills when rehabilitating the patient incommunity set up. CO4: Summarizing the role of vocational rehabilitation and community awareness in Community Based Rehabilitation. CO5: Application of various orthosis, prosthesis, devices for different medical and Physical conditions. CO6: To formulate the applicability of various approaches in the rehabilitation.
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 due to various disease conditions and plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions
8	Outline syllabus		CO Mapping
	Unit 1	**General Rehabilitation**	
	A	Conceptual framework of rehabilitation, definitions, various models of Rehab, Rehab team including Medical person/P.T./O.T. audiologist/speech therapist /P.&O./ rehab nurse/ psychologist/ vocational guide.	CO1

	B	WHO definition of Health & disease, Health care delivery system, National Policies of Rehab.	CO1, CO3
	C	Community participation and mobilization, National Institutions, and National health care Programmes	CO1, CO3
	Unit 2	**Disability & its evaluation**	
	A	Definition of Impairment, Handicap and Disability, Difference between impairment, handicap and disability.	CO2, CO3, CO6
	B	Types and Prevention and rehabilitation of disability, Screening: Early detection of disabilities	CO2, CO3, CO6
	C	Disability Evaluation: Introduction, What, Why and How to evaluate, Quantitative versus Qualitative data, Uses of evaluation findings and guidelines of disability evaluation.	CO2, CO3, CO6
	Unit 3	**Introduction and Principles of Community Based Rehabilitation**	
	A	Definition, Concept of CBR, Need for CBR, Objectives of CBR, Scope of CBR, Members of CBR team, Models of CBR, Difference between Institution based and Community based Rehabilitation, Community initiated versus community oriented Programme	CO3, CO4, CO6
	B	W.H.O.`s policies- about rural health care- concept of primary /tertiary health centers- district hospitals etc., Principles of a team work in C.B.R. of physically handicapped person, Agencies involved in rehabilitation of physical handicapped - Legislation for physically handicapped. Concept of multipurpose health worker. Role of family members in the rehabilitation of a physically handicapped	CO1, CO3, CO6
	C	Role of Physiotherapy in CBR: Screen**in**g for disabilities, Modifications physical and architectural barriers for disabled, Strategies to improve ADL Rehabilitation Programmes for various neuro- musculoskeletal and cardiothoracic disabilities like RA, Hemiplegia, Paraplegia, Cerebral palsy, Polio, severe OA, Amputation; sensory loss—vision, hearing, speech impairment, Degenerative, Geriatric patients, other disabling conditions..	CO1, CO3
	Unit 4	**Role of Government in CBR**	
	A	Role of voluntary Organizations in CBR: Charitable Organizations, Voluntary health agencies– National level and International NGO's, Multilateral and Bilateral agencies. International Health Organizations: WHO, UNICEF, UNDP, UNFPA, FAO, ILO, World bank, USAID, SIDA, DANIDA, Rockefeller, Ford foundation, CARE, RED CROSS.	CO3, CO4
	B	Employment acts: Employee state insurance scheme. Workman's compensation act. Legal aspects of disability in terms of compensation for PWD, benefits& rights.	CO3, CO4
	C	Vocational Rehabilitation: Introduction, evaluation & management	CO3, CO4
	Unit 5	**Prosthetics & Orthotics**	

	A	Definition and Biomechanical principles in designing of appliances & assessment. Classification of Aids & appliances. Differences between prosthesis and orthosis.			CO5, CO6
	B	Introduction to Splints / Orthoses – For spine,upper & lower limb. Upper Limb Orthoses: - Knuckle Bender splint, Cock Up Splint, Opponens splint, finger splints, aero plane splint, wristhand orthosis. Spinal Orthoses: Head Cervical Orthoses, Cervical, Thoraco-lumbar, Lumbo – sacral Orthoses (Knight brace, Taylors's Brace, Milwawkee Brace, Collars); Lower Limb Orthoses: HKAFO, KAFO, AFO, Foot Orthoses (Shoe Modification)			CO5, CO6
	C	Prostheses – Endoskeleton, Exoskeleton, prostheses for Lower limb and upper limb, indications and checkout			CO5, CO6
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher 2. Andrew Guccione Geriatrics Physiotherapy, Elsevier Mosby. 3. Glenda Key, Industrial Therapy, Mosby 4. Chinnathurai, Short textbook of prosthetics and orthotics, Jp MedicalPub 5. Pruthvish, Community Based Rehabilitation of Persons withDisabilities 6. Madhuri, Geriatric Medicine and Rehabilitation Medicine forPhysiotherapist 7. Squires, Rehabilitation of the Older Person , Nelson Thornes.			
	Other References	1. Mural K F, Ergonomics Man in his working environment 2. Nordin Andersons Pope, Musculoskeletal Disorders in workplace- Principle & Practice, Mosby Elsevier 3. G R Madan, Indian Social Problem Vol 2, AlliedPublishers,Disability2000-RCI 4. Gautam Bannerjee , Legal Rights of disabled in India 5. ICF -WHO Health Organisation 2001publication 6. Park, Preventive &Social Medicine, Banarsidas Bhanot 7. Hallender Padmini Mendes, Training in the Community for the peoplewith disability 8. David Werner , Disabled Village Children, Hesperian Foundation			

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	2	3
CO2	3	1	3	3	1	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	3	2	3
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.66**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 414	
2	Course Title	Advanced Rehabilitation Aids and Appliances	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Type	CC	
5	Course Objective	1. Students will be able apply knowledge in community medicine and other areas withskills to apply these in clinical situation. 2. Students will be able to identify rehabilitation methods to prevent disabilities anddysfunctions due to various disease conditions. 3. To plan treatment goals and apply the skills gained in rehabilitating and restoring functions.	
6	Course Outcomes	CO1: Understanding the concepts and Prescription of Orthosis, Prosthesis and Wheel chair. CO2: Understand the principles and training of functions using robotic devices. CO3: Understand the principles and application of Brain computer interface in Rehabilitation and training. CO4: Application of the principles of ADLs tools for daily task. CO5: Understand functioning of AV devices and their application for rehabilitation of a patients. CO6: To compile the principle and application of various aids and appliances to formulate a prescription.	
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 isthat after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions and plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions	
8	Outline syllabus		CO Mapping
	Unit 1	**Mobility Aids**	CO1
	A	Wheel chair, its parts and Prescription.	
	B	Orthotic Prescription.	
	C	Prosthetic Prescription	
	Unit 2	**Robot assisted Functional Training**	CO2, CO6
	A	Upper Limb Functional Training	
	B	Lower Limb Functional Training	
	C	Gait Training	

	Unit 3	**Brain Computer Interference**			CO3
	A	AI, Introduction, and Application			
	B	Upper Limb Training			
	C	Lower Limb Training			
	Unit 4	**Tools for ADLs**			CO4
	A	Tools for Dressing			
	B	Tools for Feeding			
	C	Tools for Typing			
	Unit 5	**Audio Visual Appliances**			CO5, CO6
	A	Audio Aids			
	B	Video Aids			
	C	Audio Visual Aids			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	8. Bhaskar Rao, Text book of Community Medicine &Community Health, Paras Medical Publisher 9. Glenda Key, Industrial Therapy, Mosby 10. Chinnathurai, Short textbook of prosthetics and orthotics, Jp MedicalPub 11. Pruthvish, Community Based Rehabilitation of Persons withDisabilities 12. .			

POsCOs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	2	3	3	3	2	1	3	2	3
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	1	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.33**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**	**2.16**	**2.16**	**2.33**	**2.16**	**2.66**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 7TH semester**	
1	Course Code	**PTB 415**	
2	Course Title	**Teamwork and interpersonal communication**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**1-0-0**	
	Course Status	CC	
5	Course Objective	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to understand the importance and challenges of team work. Also, the need of communication skills and personality development.	
6	Course Outcomes	CO1- To make them remember about the basics of teamwork, communication and its importance. CO2- To understand about the objectives, concept and need of team building. CO3- Apply the prospects for teamwork and the challenges. C04- Analyze the need and importance of communication skills. C05- To evaluate the concepts and determinants of personality development.	
		CO6: to compile the objectives, concept and need of team building	
7	Course Description	This course introduces the student about the team work , interpersonal communication and personality development.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
		Teamwork Interpersonal coomunication Importance	CO1, CO3
	Unit 2	**Teamwork**	
		The Team Building Concept Determining the Need for Team Building Objective and stages of team building	CO2, CO3, CO6
	Unit 3	**Prospects for teamwork**	
		Impediments Challenges Factors	CO1, CO3, CO6
	Unit 4	**Communication Skills**	
		-essesntials for good coomunication -types of communication -Language skills	CO1,CO4

	Unit 5	**Personality Development**			
		-Concept Dimentions Determinants			CO4, CO5, CO6
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	1.			
	Other References	1.			

POs COs	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	2	3	3	3	2	1	3	2	3
CO2	3	2	3	1	3	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	1	3	3	3	2	3
CO4	2	3	1	3	2	3	2	1	3	2	2	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.**	**2.33**	**2.33**	**2.16**	**2.33**	**2.33**	**2.33**	**2.16**	**2.16**	**2.33**	**2.16**	**2.66**	**2.66**	**2.83**

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

School: SSAHS		**Batch : 2023-27**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 416
2	Course Title	ICU PT
3	Credits	1
4	Contact Hours (L-T-P)	1-0-0
	Course Type	SEC
5	Course Objective	1. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 2. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 3. In addition, the student will be able to diagnose the conditions
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4: Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.
		CO6: to be able to compile research based rehabilitation skills required for ICU patients.
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.
8	Outline syllabus	CO Mapping

	Unit 1	**ICU PT**			CO1,CO2
	A	Chronic obstructive pulmonary disease			
	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics ICU PT**			CO1,CO2 ,CO3
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Orthopaedic ICU PT**			CO4,CO5,CO6
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Neurological ICU PT**			CO4,CO5,CO6
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Geriatric ICU PT**			CO4,CO5,CO6
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch : 2023-27**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 417
2	Course Title	PT in Paediatrics;
3	Credits	1
4	Contact Hours (L-T-P)	1-0-0
	Course Type	SEC
5	Course Objective	4. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 5. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 6. In addition, the student will be able to diagnose the conditions
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4: Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.
		CO6: to be able to compile research based rehabilitation skills required for ICU patients.
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.
8	Outline syllabus		CO Mapping
	Unit 1	**ICU pediatric PT**	CO1,CO2
	A	~~Chronic obstructive pulmonary disease~~	

	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics rehabilitation**			CO1,CO2 ,CO3
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Orthopaedic pediatric rehabilitation**			CO4,CO5,CO6
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Neurological pediatric rehabilitation**			CO4,CO5,CO6
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Paediatric Cardiopulmonary rehabilitation**			CO4,CO5,CO6
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch : 2023-27**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 418
2	Course Title	Geriatric PT
3	Credits	1
4	Contact Hours (L-T-P)	1-0-0
	Course Type	SEC
5	Course Objective	1The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 2. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 3. In addition, the student will be able to diagnose the conditions
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4: Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.
		CO6: to be able to compile research based rehabilitation skills required for ICU patients.
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.
8	Outline syllabus		CO Mapping
	Unit 1	**ICU geriatric PT**	**CO1,CO2**

	A	Chronic obstructive pulmonary disease			
	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Geriatric rehabilitation**			**CO1,CO2 ,CO3**
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Geriatric Orthopaedic rehabilitation**			**CO4,CO5,CO6**
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Geriatric Neurological rehabilitation**			**CO4,CO5,CO6**
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Geriatric cardiopulmonary rehabilitation**			**CO4,CO5,CO6**
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

Os COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 419	
2	Course Title	Hand Rehab	
3	Credits	1	
4	Contact Hours (L-T-P)	1-0-0	
	Course Type	SEC	
5	Course Objective	4. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 5. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 6. In addition, the student will be able to diagnose the conditions	
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4: Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.	
		CO6: to be able to compile research based rehabilitation skills required for ICU patients.	
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.	
8	Outline syllabus		CO Mapping
	Unit 1	**Hand ICU care**	**CO1,CO2**
	A	Postoperative management	

	B	lymphatic drainage			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics hand rehabilitation**			**CO1,CO2 ,CO3**
	A	Brachial plexus injury			
	B	Spasticity			
	C	Muscle dystrophy			
	Unit 3	**Orthopaedic hand rehabilitation**			**CO4,CO5,CO6**
	A	Flexor Tendon Injuries			
	B	Extensor Tendon Injuries			
	C	Fractures and Dislocations			
	Unit 4	**Neurological hand rehabilitation**			**CO4,CO5,CO6**
	A	Nerve Compression Syndromes			
	B	Guillain barre syndrome			
	C	Multiple Sclerosis			
	Unit 5	**Geriatric hand rehabilitation**			**CO4,CO5,CO6**
	A	Deformity of hands			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

PRACTICAL

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Semester: 8th Semester**
1	Course Code	PTB 441
2	Course Title	Physiotherapy In Cardio-Pulmonary Scienecs Including Lymphatic System (Practical)
3	Credits	1
4	Contact Hours (L-T-P)	0-0-2
	Course Status	DSC
5	Course Objective	1. To provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. 2. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs. 3. Student must know emergency drugs indication and contra- indication, care in intensive care unit (ICU) and to provide appropriate interventions to the patient
11	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. CO6: To Compile and formulate available treatment techniques and evidence ased practice for Physiotherapy management of cardiovascular conditions

7	Course Description	The subject is designed to provide knowledge in assessing and planning physiotherapy interventions for various General, Medical and Surgical conditions. The student must be able to reassess the patient as necessary, to monitor the patient in regard to treatment, to monitor the patient's vital signs, student must know emergency drugs indication and contra-indication, care in intensive care unit (ICU) and to provide appropriate interventions to the patient.	
8	Outline syllabus		CO Mapping
	Unit 1	**Cardiopulmonary Assessment**	
		1. Brief 2. Demonstration 3. Assessment tools and techniques, outcome measures.	CO1, CO2
	Unit 2	**Physiotherapy Techniques**	
		1. Brief demonstration 2. Drug therapy 3. Neonatal techniques	CO3,CO4
	Unit 3	**Pulmonary Rehabilitation**	
		1. Brief 2. Demonstration 3. Experimentation	CO4, CO5, CO6
	Unit 4	**Physiotherapy following lung surgeries**	
		1. Brief 2. Rehabilitation Protocol 3. Techniques	CO1, CO2
	Unit 5	**Lymphedema management**	
		1. Brief 2. Demonstration 3. Techniques	CO3, CO5, CO6
	Mode of examination	Practical/Viva	

	Weightage Distribution	CA	ETE		
		25%	25%	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	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	2	3	3
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	2
CO3	3	3	2	2	3	2	3	3	3	3	3	2	2	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	2
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	2
CO6	1	2	2	3	1	2	3	1	2	1	3	2	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.5**	**2.66**	**2.3**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		.	
Branch: Physiotherapy		Semester: 8th Semester	
1	Course Code	PTB 442	
2	Course Title	Physiotherapy in Obstetrics and Gynecological Condition (PR)	
3	Credits	1	
4	Contact Hours (L-T-P)	0-0-2	
	Course Type	CC	
5	Course Objective	The student will be able to Understand the importance of physiotherapy in obstetrics and gynecology, the basic concepts of techniques, the importance of exercises and preventive measure in women health.	
6	Course Outcomes	CO1 - understanding of the changing knowledge base in this clinical area CO2- Understand the impact of exercise on the altered physiology, pathophysiology and psychology of pregnancy, menopause, aging, & osteopenia / osteoporosis. CO3- Understand the motivational and marking aspect of leading community and hospital based exercise classes. CO4- Identify the legal and safety issue associated with leading exercise classes for women with specific physical need. CO5 - Plan, deliver and evaluate appropriate exercise Programmes for specific women's groups of the community CO6: To compile the observations and findings for development and planning of various gynecological conditions	
7	Course Description	In this course the student will learn the principles, technique, and effects of physiotherapy in various obstetrics and gynecological conditions.	
8	Outline syllabus		CO Mapping
	Unit 1	**Physiotherapy assessment in obstetrics**	
	A	Antenatal assessment.	CO1,CO2
	B	Assessment during labour.	CO1,CO2
	C	Postnatal assessment.	CO1,CO2
	Unit 2	**Physiotherapy assessment in gynecology**	
	A	Physiotherapy Assessment of different gynecological condition.	CO1,CO2
	B	Pre & Post operative assessment of gynecological surgery.	CO1,CO2

	C	Physiotherapy assessment of Bladder and Bowel Dysfunction. Assessment includes: Pelvic floor muscle assessment. Assessment of pain. Diagnostic tools used in gynaecological assessment. Examination of breast cancer, Puberty & common syndrome during this phase. Polycystic ovarian syndrome.			CO1,CO2
	Unit 3	**Physiotherapy in obstetrics**			
	A	Antenatal exercise in pregnancy. PT management of common syndrome of pregnancy. Role of PT in antenatal complication.			CO2,CO3
	B	Ergonomics during childbearing phase. physiotherapy in high risk pregnancy. physiotherapy during Labor and Urinary in continence.			CO2,CO3
	C	C- Section, normal delivery care and post natal physiotherapy. PT management of immediate and late postnatal complications.			CO2,CO3
	Unit 4	**Physiotherapy in gynecology**			
	A	Exercise for an adolescent female.			CO2,CO3
	B	Principles and techniques of application of pelvic floor exercises. Use of electrotherapy modalities in training Pelvic floor muscles. Therapeutic electrical stimulation. & Biofeedback.			CO2,CO3
	C	Physiotherapy management in Pelvic floor dysfunction. Physiotherapy intervention before and after gynecological surgeries.			CO2,CO3
	Unit 5	**Other Women health related condition**			
	A	Prevention and Physiotherapy intervention in Osteoporosis and PCOD.			CO4,CO5
	B	Physiotherapy management of breast cancer, Lymph edema after mastectomy.			CO4,CO5
	C	Physiotherapy management of cervical cancer, uterine cancer, hysterectomy.			CO4,CO5
	Mode of examination	Theory/Jury/Practical/Viva			
	Weight age Distribution	CA	MTE	ETE	
		25%	-	75%	
	Text book/s*	Physiotherapy in Obstetrics and Gynaecology by Margaret Polden			
	Other References	Textbook of Physiotherapy for Obstetrics and Gynecological Conditions by GB Madhuri			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	3	2	1	3	3	2	1	3	3	2	1	2	3	3
C	3	1	3	3	1	3	2	2	2	3	2	3	3	2
O2	3	3	2	2	3	2	3	3	3	3	3	2	2	2
CO3	2	3	3	3	2	3	2	1	3	2	3	3	3	2
CO4	3	2	3	1	3	2	1	3	2	3	2	3	3	2
CO5	1	2	2	3	1	2	3	1	2	1	3	2	2	3
CO6												**2.5**	**2.66**	**2.3**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 443	
2	Course Title	Community Based Rehabilitation (Practical)	
3	Credits		
4	Contact Hours (L-T-P)	**0-0-1**	
	Course Status	CC	
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 apply the skills gained in rehabilitating and restoring functions	
6	Course Outcomes	CO1: Understanding the concepts and principles of Community BasedRehabilitation and general rehabilitation. CO2: Explaining the concept of disability, its evaluation, health and geriatric health, national healthcare Programmes and policies, NGOs. CO3: Practicing appropriate physiotherapy skills when rehabilitating the patient in community set up. CO4: Summarizing the role of vocational rehabilitation andcommunity awareness in Community Based Rehabilitation. CO5: Application of various orthosis, prosthesis, devicesfor different medical and Physical conditions. CO6: To formulate the applicability of various approaches in the rehabilitation.	
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 objectiveof the course is that after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methodsto prevent disabilities and dysfunctions due to various disease conditions and plan and set treatment goals and apply the skills gained in rehabilitating and restoring functions	
8	Outline syllabus		CO Mapping
	Unit 1	**General Rehabilitation**	
		4. Brief 5. Demonstration. 6. Identification	CO1, CO3
	Unit 2	**Disability and disability evaluation**	
		-Brief -Institutional visit to PMR department	CO2,CO3

		-Demonstration			
	Unit 3	**Introduction of community physiotherapy**			
		Brief -Demonstration -Community visit			CO1,CO3
	Unit 4	**Health problems & vulnerable groups**			
		-brief -in rural areas to conduct survey of populationrequiring physiotherapy services & treatments. -demonstration			CO1,CO4
	Unit 5	**Orthotics & Prosthetics**			
		-brief -Demonstration. -Identification			CO4,CO5
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	0%	75%	
	Text book/s*	2. Bhaskar Rao, Text book of Community Medicine & Community Health, Paras Medical Publisher 3. Andrew Guccione Geriatrics Physiotherapy, Elsevier Mosby. 4. Glenda Key, Industrial Therapy, Mosby 5. Chinnathurai, Short textbook of prosthetics and orthotics, Jp MedicalPub 6. Pruthvish, Community Based Rehabilitation of Persons withDisabilities 7. Madhuri, Geriatric Medicine and Rehabilitation Medicine forPhysiotherapist 8. Squires, Rehabilitation of the Older Person , Nelson Thornes.			
	Other References	2. Mural K F, Ergonomics Man in his working environment 3. Nordin Andersons Pope, Musculoskeletal Disorders in workplace- Principle & Practice, Mosby Elsevier 4. G R Madan, Indian Social Problem Vol 2, Allied Publishers,Disability2000-RCI 5. Gautam Bannerjee , Legal Rights of disabled in India 6. ICF -WHO Health Organisation 2001publication 7. Park, Preventive &Social Medicine, Banarsidas Bhanot 8. Hallender Padmini Mendes, Training in the Community for the peoplewith disability 9. David Werner , Disabled Village Children, Hesperian Foundation			

POsCOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	2	3
CO2	3	1	3	3	1	3	2	2	2	3	2	2	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	3	2	3
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	2	3	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.66**	**2.66**	**2.83**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8TH semester**	
1	Course Code	**PTB 445**	
2	Course Title	**Teamwork and interpersonal communication**	
3	Credits	**1**	
4	Contact Hours (L-T-P)	**0-0-2**	
	Course Status	CC	
5	Course Objective	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to understand the importance and challenges of team work. Also, the need of communication skills and personality development.	
6	Course Outcomes	CO1: To make them remember about the basics of teamwork, communication and its importance. CO2: To understand about the objectives, concept and need of team building. CO3: Apply the prospects for teamwork and the challenges. C04: Analyze the need and importance of communication skills. C05: To evaluate the concepts and determinants of personality development. CO6: to compile the objectives, concept and need of team building	
7	Course Description	This course introduces the student about the team work , interpersonal communication and personality development.	
8	Outline syllabus		CO Mapping
	Unit 1	**Introduction**	
		Teamwork Interpersonal coomunication Importance	CO1, CO3
	Unit 2	**Teamwork**	
		The Team Building Concept Determining the Need for Team Building Objective and stages of team building	CO2,CO3
	Unit 3	**Prospects for teamwork**	
		Impediments Challenges Factors	CO1,CO3
	Unit 4	**Communication Skills**	
		-essesntials for good coomunication -types of communication -Language skills	CO1,CO4

	Unit 5	**Personality Development**			
		-Concept Dimentions Determinants			CO4,CO5
	Mode of examination	Practical/Viva			
	Weightage Distribution	CA	MTE	ETE	
		25%	25%	50%	
	Text book/s*	9.			
	Other References	10.			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	3	2
CO2	3	1	3	3	1	3	2	2	2	3	2	3	3	3
CO3	3	3	2	2	3	2	3	3	3	3	3	2	3	3
CO4	2	3	3	3	2	3	2	1	3	2	3	3	3	3
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	3	2	2
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.83**	**2.83**	**2.66**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 446	
2	Course Title	**ICU PT**	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Type	CC	
5	Course Objective	1. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 2. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 3. In addition, the student will be able to diagnose the conditions	
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning.scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4:Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health. CO6: to be able to compile research based rehabilitation skills required for ICU patients.	
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.	
8	Outline syllabus		CO Mapping
	Unit 1	**ICU rehabilitation**	**CO1,CO2**
	A	Chronic obstructive pulmonary disease	

	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics ICU**			**CO1,CO2 ,CO3**
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Orthopaedic ICU**			**CO4,CO5,CO6**
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Neurological ICU**			**CO4,CO5,CO6**
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Geriatric ICU**			**CO4,CO5,CO6**
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 444	
2	Course Title	**PT in Paediatrics**	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Type	CC	
5	Course Objective	4. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 5. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 6. In addition, the student will be able to diagnose the conditions	
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning.scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4:Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health. CO6: to be able to compile research based rehabilitation skills required for ICU patients.	
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.	
8	Outline syllabus		CO Mapping
	Unit 1	**ICU Pedaitric rehabilitation**	**CO1,CO2**
	A	Chronic obstructive pulmonary disease	

	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics rehabilitation**			**CO1,CO2 ,CO3**
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Paediatric Orthopaedic rehabilitation**			**CO4,CO5,CO6**
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Paediatric Neurological rehabilitation**			**CO4,CO5,CO6**
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Paediatric cardiopulmonary rehabilitation**			**CO4,CO5,CO6**
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		Batch: 2023-2027
Programme: BPT		.
Branch: Physiotherapy		Semester: 8th Semester
1	Course Code	**PTB 450**
2	Course Title	**Geriatric PT**
3	Credits	2
4	Contact Hours (L-T-P)	0-0-4
	Course Type	CC
5	Course Objective	7. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 8. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 9. In addition, the student will be able to diagnose the conditions
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning.scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4:Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health. CO6: to be able to compile research based rehabilitation skills required for ICU patients.
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.

8	Outline syllabus				CO Mapping
	Unit 1	**Geriatric ICU rehabilitation**			**CO1,CO2**
	A	Chronic obstructive pulmonary disease			
	B	Restrictive pulmonary conditions			
	C	Positioning and mobilization			
	Unit 2	**Geriatric rehabilitation**			**CO1,CO2 ,CO3**
	A	Delayed milestones			
	B	Cerebral palsy			
	C	Muscle dystrophy			
	Unit 3	**Geriatric Orthopaedic rehabilitation**			**CO4,CO5,CO6**
	A	Road traffic accident			
	B	Surgical management of spine and extremities			
	C	Hand rehabilitation			
	Unit 4	**Geriatric Neurological rehabilitation**			**CO4,CO5,CO6**
	A	Cerebrovascular disease			
	B	Guillain barre syndrome			
	C	Respiratory muscle strengthening			
	Unit 5	**Geriatric rehabilitation**			**CO4,CO5,CO6**
	A	Chronic obstructive pulmonary disease,			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	**PTB 451**	
2	Course Title	**Hand Rehab**	
3	Credits	2	
4	Contact Hours (L-T-P)	0-0-4	
	Course Type	CC	
5	Course Objective	10. The objective of this course is, the student will be able to assess different condition due to neurological dysfunction, set treatment goals and apply their skill. 11. Students will understand the role exercise therapy and use of different neurological scales for outcome measures. 12. In addition, the student will be able to diagnose the conditions	
6	Course Outcomes	CO1: Be able to develop research based rehabilitation skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to ICU patient CO2: Be able to select timely research based physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on obstructive and restrictive pulmonary disorder and be able to rehabilitate the chest conditions based on positioning.scales and measure the outcomes. CO3: Implement appropriate research based neuro-physiotherapeutic approaches for patients With pediatric abnormality. CO4:Be able to make rehabilitation for orthopedic, neurological and geriatric conditions. CO5: Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health. CO6: to be able to compile research based rehabilitation skills required for ICU patients.	
7	Course Description	The subject serves to integrate the knowledge gained by the students in ICU and other Systemic disorder with skills to apply these in clinical situations of dysfunction and 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 ICU conditions dysfunction, plan and set treatment goals and apply the skills gained in exercise therapy and electrotherapy in these clinical situations to restore function and measure the outcomes of treatment and predict the prognosis of patient.	
8	Outline syllabus		CO Mapping
	Unit 1	**Hand ICU care**	**CO1,CO2**

	A	Postoperative management			
	B	lymphatic drainage			
	C	Positioning and mobilization			
	Unit 2	**Paediatrics hand rehabilitation**			**CO1,CO2 ,CO3**
	A	Brachial plexus injury			
	B	Spasticity			
	C	Muscle dystrophy			
	Unit 3	**Orthopaedic hand rehabilitation**			**CO4,CO5,CO6**
	A	Flexor Tendon Injuries			
	B	Extensor Tendon Injuries			
	C	Fractures and Dislocations			
	Unit 4	**Neurological hand rehabilitation**			**CO4,CO5,CO6**
	A	Nerve Compression Syndromes			
	B	Guillain barre syndrome			
	C	Multiple Sclerosis			
	Unit 5	**Geriatric hand rehabilitation**			**CO4,CO5,CO6**
	A	Deformity of hands			
	B	Stroke, Parkinson disease			
	C	Arthritis, Osteoporosis			
	Mode of examination	Theory/Jury/Practical/Viva			
	Weightage Distribution	CA	MSE	ESE	
		25%		75%	
	Text book/s*	PJ Mehta Principle of geriatric physiotherapy- Narinder kaur multani Textbook of critical care-Vincent			
	Other References	Clinical orthopaedic Rehabilitation- S Brent Brotzman Physical rehabilitation- sullivan			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	2	3	2	3	3	2	3	2	3	2	2	3	3	2
CO2	3	3	2	3	1	3	3	3	3	3	3	3	3	3
CO3	3	3	2	3	3	2	3	3	1	3	3	2	3	3
CO4	3	1	3	3	1	3	3	1	2	3	2	3	2	3
CO5	3	3	2	2	3	2	3	3	3	3	2	3	3	3
CO6	3	2	1	3	2	1	1	2	3	3	2	1	2	3
Average PO's	**2.83**	**2.5**	**2**	**2.83**	**2.16**	**2.16**	**2.66**	**2.33**	**2.5**	**2.83**	**2.33**	**2.5**	**2.66**	**2.83**

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	PTB 447	
2	Course Title	Clinical Reasoning –II (CT)	
3	Credits	**2**	
4	Contact Hours(L-T-P)	**0-0-4**	
	Course Type	CC	
5	Course Objective	1- To perform effective consultations using clinical reasoning. 2- To develop professional practice using clinical reasoning.	
6	Course Outcomes	CO1: To understand factors affecting clinical reasoning (CR). CO2: To perform hypothetico-deductive CR. CO3: To demonstrate patient education during clinical reasoning (CR). CO4: To demonstrate use of technology and equipment for clinical reasoning. CO5: To demonstrate mastery of clinical reasoning. CO6: To formulate the list of differential diagnosis basis on the clinical reasoning.	
7	Course Description	Clinical reasoning in clinical settings represents a written mode of consultation & communication for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively.	
8	Outline syllabus		CO Mapping
	Unit 1	**Factors affecting Clinical Reasoning**	
	A	Expertise	CO1, CO2
	B	Focus and attention	CO1,CO2
	C	Cases	CO1,CO2
	Unit 2	**Patient Education**	
	A	Clinical reasoning and patient education	CO1, CO3
	B	Addressing misconceptions.	CO1, CO3
	C	Cases	CO1, CO3
	Unit 3	**Scope of Clinical reasoning**	
	A	Screening for red flags	CO1,CO3
	B	Referral to other health care providers	CO1,CO3
	C	Cases	CO1,CO3
	Unit 4	**Difficult cases and clinical reasoning**	
	A	Patients refusing treatment	CO2,CO4,CO6
	B	Improvement not seen	CO2,CO4,CO6

	C	Cases			CO2,CO4
	Unit 5	**Use of Technology in Clinical Reasoning**			
	A	PT assessment equipment			CO1,CO5
	B	Technology in PT consultation			CO1,CO5,CO6
	C	Cases			CO1,CO5
	Mode of examination	Clinical examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 3. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. 4. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf 2. http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO 8	PO 9	PO1 0	PO1 1	PSO 1	PSO 2	PSO 3
CO1	3	2	1	3	3	2	1	3	3	2	1	3	3	2
CO2	3	1	3	3	1	3	2	2	2	3	2	2	2	3
CO3	3	3	2	2	3	2	3	3	3	3	3	2	3	2
CO4	2	3	3	3	2	3	2	1	3	2	3	3	2	2
CO5	3	2	3	1	3	2	1	3	2	3	2	3	3	3
CO6	1	2	2	3	1	2	3	1	2	1	3	3	2	3
Average PO's	**2.5**	**2.16**	**2.33**	**2.5**	**2.16**	**2.33**	**2**	**2.16**	**2.5**	**2.33**	**2.33**	**2.66**	**2.5**	**2.5**

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

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	**PTB 448**	
2	Course Title	Clinical Skills – II (CT)	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	1- To perform & demonstrate basic clinical skills. 2- To perform & demonstrate advanced clinical skills.	
6	Course Outcomes	CO1:To demonstrate & perform clinical skills in OPD. CO2: To demonstrate & perform clinical skills in ICU CO3: To demonstrate Clinical skills in community PT. CO4: To demonstrate lifelong learning for clinical skills.. CO5: To demonstrate mastery of clinical Skills. CO6: to be able to develop a diagnosis and formulate a rehabilitation basis on clinical skills.	
7	Course Description	Clinical skills in PT settings represents a mode of treatment for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively.	
8	Outline syllabus		CO Mapping
	Unit 1	**Advanced PT Clinical Skills in Podiatry.**	
	A	Introduction	CO1, CO2
	B	Advanced PT techniques	CO1,CO2
	C	Cases	CO1,CO2
	Unit 2	**Advanced PT Clinical Skills in hand rehabilitation.**	
	A	Different approaches for hand conditions	CO1, CO3
	B	Advanced PT techniques	CO1, CO3, CO6
	C	Cases	CO1, CO3,CO6
	Unit 3	**Advanced PT Clinical Skills in geriatric community cases.**	
	A	Screening and PT education	CO1,CO3
	B	Advanced PT techniques	CO1,CO3
	C	Cases	CO1,CO3
	Unit 4	**Advanced PT Clinical Skills in ventilated cases.**	

	A	ICU PT skills			CO2,CO4, CO6
	B	Advanced PT techniques			CO2,CO4. CO6
	C	Cases			CO2,CO4
	Unit 5	**Advanced PT Clinical Skills in pediatric cases.**			
	A	Handling of pediatric case			CO1,CO5, CO6
	B	Advanced PT techniques			CO1,CO5,CO 6
	C	Cases			CO1,CO5
	Mode of examination	Clinical examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 3. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14.			
		4. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf 2. http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	3	2	1	1	2	3	3	2	1	2	3	3	2	3
CO2	3	3	3	2	2	2	2	3	1	3	3	2	3	2
CO3	3	1	3	2	3	2	3	1	3	2	1	3	2	3
CO4	2	3	3	2	3	3	2	3	3	2	3	3	3	3
CO5	3	2	1	3	2	3	1	3	2	1	3	3	2	3
CO6	2	1	3	1	1	1	3	2	2	3	2	2	3	2
Average PO's	**2.66**	**2**	**2.33**	**1.83**	**2.16**	**2.33**	**2.3**	**2.33**	**2**	**2.16**	**2.5**	2.66	2.5	2.66

School: SSAHS		**Batch: 2023-2027**	
Programme: BPT		**.**	
Branch: Physiotherapy		**Semester: 8th Semester**	
1	Course Code	**PTB 449**	
2	Course Title	Clinical Documentation – II (CT)	
3	Credits	**2**	
4	Contact Hours (L-T-P)	**0-0-4**	
	Course Type	Compulsory	
5	Course Objective	1. To enable the students to document various aspects clinical presentations using ICD & ICF. 2. To enable the students to document various aspects clinical presentations for case studies and case presentations.	
6	Course Outcomes	CO1:To perform documentation as per ICF. CO2: To perform ICD documentation. CO3: To demonstrate Case study documentation. CO4: To demonstrate Case presentation documentation CO5: To demonstrate mastery of clinical documentation CO6: To able to compile all the documentation required to for the case study	
7	Course Description	Documentation in clinical settings represents a written mode of communication for better patient management. It is for all stakeholder's accountability and responsibility. It has medico-legal implications as well. Physiotherapists within the scope of practice shall take part in this effectively	
8	Outline syllabus		CO Mapping
	Unit 1	**Formats of Assessment - ICF**	
	A	General ICF	CO1, CO2
	B	Physiotherapy Assessment & ICF	CO1,CO2
	C	Functional Assessment as per ICF	CO1,CO2
	Unit 2	**ICD format**	
	A	Introduction	CO1, CO3
	B	ICD usage	CO1, CO3
	C	ICD to disease diagnosis & Goal Planning	CO1, CO3
	Unit 3	**Case study**	
	A	Formats	CO1,CO3,CO6
	B	Case records	CO1,CO3,CO6
	C	Communication of cases	CO1,CO3

	Unit 4	**Case presentation**			
	A	Formats			CO2,CO4,CO6
	B	Presentations			CO2,CO4
	C	Documentation of the presentations			CO2,CO4
	Unit 5	**Case Publications**			
	A	Formats			CO1,CO5CO6
	B	Writing papers and preparing manuscripts			CO1,CO5,CO6
	C	Communicating manuscript & Getting published			CO1,CO5
	Mode of examination	Clinical case assessment & examination			
	Weightage Distribution	CA	ESE		
			CE-VIVA	External Exam Practical	
		25%	25%	50%	
	Text book/s*	1. Watts, N. (1990) Handbook of Clinical Teaching, Churchill Livingstone, Melbourne. 2. Barrows, H.S. (1984) A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall, in Schmidt, H.G. and de VoIder, M.L. (eds) Tutorials in Problem-Based Learning. New Directions for Training in the Health Professions. Masstricht. Van Gorcum, Assen 3. Benner, P. and Wrubel, J. (1982a) Skilled clinical knowledge: the value of perceptual awareness. Part 1. The Journal of Nursing Administration, May, 11-14. 4. Kolb, D.A. (1984) Experiential Learning: Experiences as the Source of Learning and Development, Prentice-Hall, New Jersey.			
	Other References	1. https://www.apta.org/uploadedFiles/APTAorg/About_Us/Policies/BOD/Practice/DocumentationPatientClientMgmt.pdf 2. http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf			

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	1	3	3	2	2	2	3	3	2	3	3	2	3	3
CO2	2	2	1	1	3	3	2	3	3	2	2	3	3	3
CO3	2	1	3	3	3	1	1	3	2	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	1	3	3	3
CO5	3	3	2	3	3	2	1	3	3	3	2	3	3	3
CO6	3	2	1	2	3	1	2	2	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2**	**2.33**	**2.83**	**2**	**2**	**2.83**	**2.33**	**2.66**	**2.33**	**2.83**	**2.83**	**3**

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

School: SSAHS		**Batch: 2023-2027**
Programme: BPT		**.**
Branch: Physiotherapy		**Internship**
1	Course Code	PTB 501
2	Course Title	INTERNSHIP
3	Credits	20
4	Contact Hours (L-T-P)	
	Course Status	CC
5	Course Objective	To enable the student to assess, diagnose, evaluate, and treat various conditons in OPD, IPD and ICUs.
6	Course Outcomes	CO1: Student will be able to perform the OPD assessment of Neurological, Orthopaedics, and Cardiovascular and pulmonary, sports, Paediatrics, Geriatrics and Gynaecology and Obstetrics based conditions. CO2: Student will be able to perform the IPD assessment of Neurological, Orthopaedics, and Cardiovascular and pulmonary, sports, Paediatrics, Geriatrics and Gynaecology and Obstetrics based conditions. CO3: Student will be able to make provisional diagnosis and diagnosis of Neurological, Orthopaedics, and Cardiovascular and pulmonary, sports, Paediatrics, Geriatrics and Gynaecology and Obstetrics based conditions. CO4: Student will be able to understand and evaluate the scale based outcomes of Neurological, Orthopaedics, and Cardiovascular and pulmonary, sports, Paediatrics, Geriatrics and Gynaecology and Obstetrics based conditions. CO5: Student will be able to create systematic rehabilitation Programme for the patients and train them for achieving the ideal activity of daily living outcomes.
7	Course Description	Enabling the student to do the assessment, diagnosis, evaluation, and treatment various conditions in OPD, IPD and ICUs.
8	Outline syllabus	

POs COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO1	1	3	3	2	2	2	3	3	2	3	3	2	3	3
CO2	2	2	1	1	3	3	2	3	3	2	2	3	3	3
CO3	2	1	3	3	3	1	1	3	2	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3	3	1	3	3	3
CO5	3	3	2	3	3	2	1	3	3	3	2	3	3	3
CO6	3	2	1	2	3	1	2	2	1	2	3	3	2	3
Average PO's	**2.33**	**2.33**	**2**	**2.33**	**2.83**	**2**	**2**	**2.83**	**2.33**	**2.66**	**2.33**	**2.83**	**2.83**	**3**

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