

# INTEGRAL UNIVERSITY, LUCKNOW

**INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH** 

# **DEPARTMENT OF PHYSIOTHERAPY**

# BACHELOR OF PHYSIOTHERAPY (BPT) SYLLABUS

YEAR/ SEMESTER: II/III



Effective from Session: 2016-17										
Course Code	PT201	Title of the Course	PATHOLOGY	L	Т	Р	С			
Year	II	II         Semester         III         2         1         0         3								
Pre-Requisite	Nil	Nil <b>Co-requisite</b> Nil								
	Acquire the k	Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs-; capacity of the body								
Course Objectives	in healing p	n healing process. Recall the etiopathogenesis, the pathological effects & the clinico-pathological correlation of common								
	infections & noninfectious diseases.									

	Course Outcomes								
CO1	Students able to understand the structure & functions of Cell, Cardinal sign of inflammation and neoplasm.								
CO2	Students able to understand the Vascular & Cardiorespiratory System.								
CO3	Students able to understand the bones and joints diseases.								
CO4	Students able to understand the Patho-physiology and associated problems.								
CO5	Students able to learn the disease related to nervous system including Myopathies, Myasthenia gravis, Muscular dystrophy								

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	CELL INJURY, INFLAMMATION & NEOPLASMS	<b>Cells:</b> Brief out line of cell injury, hypertrophy, atrophy, degeneration, necrosis and gangrene. <b>Inflammation:</b> Definition, vascular and cellular phenomena, difference between transudate and exudates, granuloma. <b>Neoplasm:</b> Definition, characteristic features, benign and malignant tumor, spread of tumor, cancer pain syndrome	6	C01
2	VASCULAR & CARDIORESPIRAT ORYSYSTEM:	<b>Circulatory Disturbance:</b> Odema, Hemorrhage, Embolism, Thrombosis, Infraction, Shock, Volkmann's ischemic contracture. <b>Blood Disorder:</b> Concepts of Anemia, Bleeding disorder-Hemophilia. <b>Cardio Vascular System (CVS):</b> Etiopathogenesis and Gross pathology of Atherosclerosis, coronary heart disease, Rheumatic heart disease. <b>Respiratory System:</b> Chronic Bronchitis, Asthma, Bronchiectasis, Emphysema	6	CO2
3	BONES, JOINTS & MUSCULAR SYSTEM:	<b>Bones:</b> Etiopathogenesis and gross pathology of fallowing conditions: Rickets/Osteomalacia, Osteoporosis, Osteomyelitis, Hyper parathyroidism <b>Joint:</b> Osteoarthritis, Rheumatoid Arthritis, Gout, Spondyloarthopathy (including Ankylosing Spondylitis), Osteonecrosis, Paget's disease. <b>Muscles:</b> Myositis ossificans, Myofascial Pain syndrome, Septic arthritis	6	CO3
4	HEPATO-BILIARY, ENDOCRINE & INTEGUMENTARY SYSTEM	<b>Hepato-Biliary System:</b> Jaundice Types, Etiopathogenesis and diagnosis. <b>Endocrine:</b> Diabetes Mellitus, Non Neoplastic lesion of thyroid-Thyrotoxicosis, Myxedema. <b>Skin:</b> Brief outline of Scleroderma, Psoriasis, Pressure Ulcer, and Burn.	6	CO4
5	CENTRAL NERVOUS SYSTEM:	<b>CNS:</b> Etiopathogenesis and gross pathology of fallowing conditions- Meningitis, Encephalitis, Parkinson's, Amyotrophic lateral sclerosis, Ataxias, Multiple sclerosis, Neuropathies (Carcoat Marie Tooth disease, Compression and Entrapments, diabetics G.B. Syndrome), malformation, CVA, Extredural and Intra Dural Hematoma. <b>Muscle</b> <b>Neuropathies:</b> Poliomyelitis, Myopathies, Myasthenia gravis, Muscular dystrophy.	6	CO5
Referen	ce Books:			
1. Te	xt book of Pathology - b	y Harsh Mohan		
2. Te	xtbook of Pathology By	Boyd		
5. Ge 4 Pat	thologic basis of disease	iende is by Cotran, Kumar, Robbins		
e-Lear	ning Source:	s by Conan, Kuma, Kobbins		
1. <u>ht</u> 2. <u>ht</u>	ttps://youtu.be/WFm9j1 ttps://youtu.be/vLCg_ky	rNkQs <u>uyw4</u>		
3. <u>h</u>	ttps://youtu.be/xLEw7c	eog8M AN4w		
<u>4.11</u> 5. h	https://youtu.be/dHURM	ID4v8Kk		

					C	ourse	Articu	lation	Matrix	: (Mapp	oing of C	COs with	POs and	PSOs)			
PO-PSO	DO1	DO1	DO3	DO4	DO5	DOG	DO7	DOS	DOO	<b>DO10</b>	DO11	DO12	DSO1	DSO2	DSO3	DSO4	DSO5
CO	FOI	FO2	F03	FU4	F05	FU0	FO7	FU8	F09	FOID	FOIT	FO12	1301	F302	1303	F304	1505
CO1	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO2	3	3	-	2	-	2	-	-	2	3	-	1	3	-	1	1	-
CO3	3	3	-	3	-	2	-	-	1	2	-	1	3	-	2	2	-
CO4	3	3	-	3	-	2	-	-	1	2	-	1	3	-	1	1	-
CO5	3	3	-	2	-	2	-	-	1	3	-	1	3	-	1	1	-

Course Code	Course Title				Attributes				SDGs No.
PT201	PATHOLOGY	Employability	Entrepren eurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
		4	√	4	*		*	*	3,4



Effective from Sess	Effective from Session: 2016-17										
Course Code	PT202	PT202     Title of the Course     MICROBIOLOGY     L     T     P     C									
Year	II	Semester	III	2	1	0	3				
Pre-Requisite	Nil	Co-requisite	Nil								
Course Objectives	At the end of the coupertaining to Immunol organisms causing dise The knowledge and une measures to the patient.	rse, the candidate will logy, Virology, Bacter ases including nosocom derstanding of Microbic	have sound knowledge of the agent responsible for cau iology, & Mislaneous condition. Microbiology involves ial infections and precautionary measures to protect one fr logy of diseases is essential to institute appropriate treatme	the som account of the som account of the second se	human tudy o quiring suggest	infection f comm infection preven	ons, non ons. tive				

	Course Outcomes						
CO1	Students able to understand Morphology, Nutritional Requirements, Metabolism, Growth, Classification and identification of Microbii.						
CO2	Students able to understand nature of immunity like innate and acquired.						
CO3	Students able to understand invegination of various types of bacteria.						
CO4	Students able to understand invegination of various types of viruses.						
CO5	Students able to understand various types of Parasitology and precautionary measurement against them.						

Uni t No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO					
	GENERAL	Introduction and history of Medical Microbiology. Morphology, Nutritional Requirements,							
1	MICROBIOLOGY	Metabolism, Growth, Classification and identification of Bacteria. Sterilizations and Disinfection.	6	CO1					
		Infection, Immunity, Antigens, antibody, antigen-Antibody, Reaction, Complement System.							
2	IMMUNOLOGY	Structure and Function of Immune system, Immune Response. Immuno-deficiency Diseases,	6	CO2					
		Hypersensitivity, Autoimmunity.							
	Staphylococcus, Streptococcus, Pneumococcus, Neisseria, Corny bacterium, Clostridium,								
3	BACTERIOLOGY	Bacillus, Enterobacteriaceae, Pseudomonas, Vibrio. Mycobacteria, Treponema.	6	CO3					
	VIROLOGY	General Characteristics and Classification of Virus, Virus-Host Interaction, DNA and RNA Virus		<b>GO</b> 4					
4		Measles, Mumps, Rubella, Polio, Influenza, Rabies, Dengue, Hepatitis, HIV.	6	CO4					
		Medical Mycology, Parasitology, Normal Microbial Flora of The Human Body, Hospital							
5	MISLANEOUS	Acquired Infection, Universal Precautions.	6	CO5					
Refer	ence Books:								
1. 1	Fextbook of Parasitolog	gy- K. D. Chatterjee (12 <sup>th</sup> Ed.)							
2. ]	Text Book of Microbio	logy – Paniker (9 <sup>th</sup> Ed.)							
3. I	Essentials of Medical M	Iicrobiology-Sastry Apurba Shankar (1 <sup>st</sup> Ed.)							
4. 1	Fextbook of Microbiolo	ogy –P. Chakraboty							
e-L	earning Source:								
1.	https://youtu.be/BV3	tDTNqFEQ							
2.	2. <u>https://youtu.be/cMVyrrdgaYk</u>								
3.	3. <u>https://youtu.be/ev_mLporfOU</u>								
4. <b>I</b>	https://youtu.be/wdo3	<u>3E2w0c18</u>							

		Course Articulation Matrix: (Mapping of Cos with Pos and PSOs)															
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	POS	POQ	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO/	PSO5
CO IOI	101	102	105	104	105	100	107	100	10)	1010	1011	1012	1501	1502	1505	1504	1505
CO1	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-
CO2	2	3	-	2	-	2	-	-	-	1	-	2	3	-	2	2	-
CO3	3	3	-	1	-	1	-	-	1	1	-	1	2	-	1	1	-
CO4	2	3	-	1	-	2	-	-	-	1	-	2	2	-	1	1	-
CO5	2	3	-	1	-	2	-	-	-	1	-	2	3	-	1	1	-

Attributes & SDGs										
<b>Course Code</b>	Course Title		Attributes							
PT202	MICROBIOLOGY	Emplo yability	Entrepre neurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
		1	√	√	*		4	√	3,4	



Effective from S	Effective from Session: 2016-17						
Course Code	PT203	Title of the Course	EXERCISE THERAPY	L	Т	Р	С
Year	II	Semester	III	3	1	0	4
Pre-Requisite	NIL	Co-requisite	NIL				
Course Objectives	To describe & and also ad application of various man the same and also know a of Ambulatory devices ar motion & and to understa gymnasium.	cquire the skill of use of nual muscle testing proc bout various tools used ad their measurement or and the application of s	f various tools of the Goniometry and measure range of mot redures & and describe the Physiological effects, therapeutic in strengthening exercise. To acquire a skill of assessment of models. Recall the basic principles of Physics related to n uch principles to the simple equipment designs & and; the	ion. A use, n of Gait techan r effic	cquire herits / , Postu- ics of r acy in	the ski demerit re and noveme the rape	ll of ts of uses ent / eutic

#### **Course Outcomes**

	ovarise ovarednites
CO1	Student able to understand fundamental starting position and derived position and also able to utilize these specific positions for specific
001	exercises.
CO2	Demonstrate the effective exercise therapeutic skills Goniometry measurement with strong theoretical knowledge on patients
CO3	Student able to evaluate functional muscular strength and design the various strengthening protocols.
CO4	Students must know about the different types of Equipments used in Gymnasium, and their setup of equipments and also their utilization, also

ıp quip CO4 able to use suspension therapy unit for rehabilitation.
 CO5 Student able to learn the posture and various types of gait in order to enhance normal walking pattern which is used in ADL. 

Unit No.	Title of t	he Unit							Conter	nt of Unit	t				Con Hi	tact s.	Mapped CO
1	FUNDAM STAR' POSITI DERI POSIT	IENTAL FING ON & VED FION	1. E n 2. N T A	Brief de nuscle v <b>Iovem</b> Sechniq Active n	scriptio work, st e <b>nts:</b> I ues of noveme	n of fu ability, Definition applic ents, Ac	ndamer effects on of l ation, ctive as	ntal star s & use: Movem indicati sisted n	ting pos s in phy ents, B on, cor noveme	sition & c siotherap rief desc atraindica nt, Passiv	lerived po y. ription & tion, effo re movem	osition in z Classifi ects & u aent & Re	cluding jo cation of ses of the sisted mo	int position movemen e followin ovement.	15, ts. 8 g-	;	CO1
2	RANG MOTIO GONION	E OF ON & ⁄IETRY	1. <b>F</b> a 2. <b>C</b> o li	Range ( bnorma Goniom f gonio imbs, lo	of Mot al End f netry: I ometry. ower lin	ion: D eels of Definiti Testing nbs and	Definition the Join on of C g positi l trunk.	on of H nts. Goniom on, pro	Range of etry and cedure	of Motion I its type and meas	n, norma s. Princip urement	l range of bles, techn of ROM	of motion nique and of the joi	, normal & application nts of uppe	k n 8 r	;	CO2
3	MAN MUS TESTING STRENG G EXEI	UAL CLE (MMT): THENIN RCISE:	<ol> <li>Manual Muscle Testing (MMT): Definition, Principle, Grading and application techniques. Indication, Contraindication, Precaution, Testing position, procedure and gradin of muscles of the upper limb, lower limb trunk, face and neck.</li> <li>Strengthening Exercise: Definition of Strengthening Exercise. Principles, different mode of Strengthening Exercises.</li> </ol>										s g f 8 n	;	CO3		
4	THERAI GYMNA SUSPEI THER	PEUTIC SIUM: NSION APY	<ol> <li>1. Therapeutic Gymnasium: Set-up of gymnasium &amp; its importance, various equipment in the gymnasium. Operational skills, effects, &amp; uses of each equipment.</li> <li>2. Suspension Therapy: Definition, types, principles, technique of application, indication contraindication, precaution, effects &amp; uses of suspension therapy.</li> </ol>										e 1, 8	;	CO4		
5	POSTURE AMBUL TRAIN	E,GAIT & ATORY NING	<ul> <li>A T Contraindication, precation, effects &amp; uses of suspension interapy.</li> <li>I. Posture overview: Mechanism of the normal posture. Abnormal posture: assessment, types, aetiogenesis management including therapeutic exercises.</li> <li>Gait: Definition of Gait, Gait cycle. Time-distance Parameters of Gait, determinants of gait, Gait deviations.</li> <li>Ambulatory Training: Walking aids and its types, indications, contraindication, effects &amp; uses of suspension interapy.</li> </ul>									s, ;, 8 &	;	CO5			
Refer	ence Books:							1									
1. Ki	sner and Colb	y. F.A. Da	vis, The	rapeutic	Exercis	es Foun	dations	and Tec	hniques								
2. Ga	ardiner, Princi	ple of Exe	cise Th	erapy, C	B.S.L	Delhi.	n: A Gu	ida to G	oniomet	•\$7							
4. W	ood - W.B. Sa	unders, B	eard's M	assage.	1 01 3011	it Within	n. A Ou		omomeu	y.							
e-Le	earning Sou	rce:		0													
1	.https://yout	u.be/_VI	XCmp	<u>Q2M</u>													
2	.https://yout	u.be/Z5_	McW2	lqsc													
3	https://yout	u.be/S5T	IFt1Blc	<u>IM</u>													
4	. <u>https://yout</u>	u.be/J6s1	DZUS	<u>Qo</u>													
				1	1	Cou	rse Art	iculation	n Matrix	: (Mappi	ng of COs	with POs	and PSOs	5)			
PO-	PSO PO	1 PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
C	01 1	3	2	1	2	1	1	1	1	-	-	2	2	2	1	-	1
С	02 2	2	3	2	3	1	1	1	-	2	1	1	2	2	2	3	2
C	03 2	3	3	2	3	2	1	2	-	2	-	1	3	3	1	3	1
C	04 2	2	2	1	2			1	2	-	-	2	3	2	2	2	1

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation Attributes & SDGs

CO5

Course Code	Course Title		Attributes										
PT 203	EXERCISE THERAPY	Employ ability	Entrepren eurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics					
11200		1	1	۰ ۲	1		1	1	3,4				



Effective from S	ession: 2016-17												
Course Code	PT204	Title of the Course	ELECTROTHERAPY	L	Т	Р	С						
Year	II	Semester	Ш	III 3 1 0									
Pre-Requisite	Nil	Co-requisite	Nil										
	At the end of the course, the candidate will be able to Describe the Production & Physiological effects, Therapeutic uses, merits,												
Course	demerits indication & con	traindications of various	s low, medium & high frequency modes of currents. Acquire	e the sl	kill of A	Appli cat	tion						
Objectives	of the Electro therapy mo	odes on models, for the	purpose of Assessment & Treatment. Acquire an ability	to sele	ct the a	ppropr	iate						
	mode as per the tissue specific & area specific application												

	Course Outcomes
CO1	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
CO2	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
CO3	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients.
CO4	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of application,
	contraindications of the various High frequency equipments.
CO5	Electro Physical Agents –I: Practice towards Scientific excellence.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	BASIC OF CURRENTS & LOW FREQUENCY CURRENTS:	<ol> <li>Basic of Currents: Introduction to History of currents, Production, Physiological effects on Nerve and Muscle tissue and therapeutic effects to AC, DC and Modified Currents.</li> <li>Transcutaneous Electric Nerve Stimulation (TENS): History of Transcutaneous Electric Nerve Stimulation (TENS). Types of low frequency, pulse widths, frequencies &amp; intensities used as TENS applications. Principle of clinical application effects &amp; uses indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation. Theories of pain relief by TENS.</li> <li>Muscle Stimulators (MS): Muscle Stimulators (MS) Types of frequency, pulse widths, frequencies &amp; intensities used as MS applications. Principle of clinical application effects &amp; uses indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation.</li> <li>Iontophoresis: Definition, Physiological &amp; Therapeutics effects, Principle of application, Methods of Application, indications, contraindications, precautions.</li> </ol>	8	CO1
2	MEDIUM FREQUENCY CURRENTS:	<ol> <li>Interferential Therapy (IFT): History of Interferential therapy (IFT), Types of medium frequency, pulse widths, frequencies &amp; intensities used as IFT applications. Principle of clinical application, effects, uses, indications, contraindications, precautions, and operational skills of equipment &amp; patient preparation. Theories of pain relief by IFT.</li> <li>Russian Currents (RC): Russian Currents (RC), Types of frequency, pulse widths, frequencies &amp; intensities used as RC applications. Principle of clinical application effects, uses, indications, contraindications, and operational skills of equipment &amp; patient preparation.</li> </ol>	8	CO2
3	HIGH FREQUENCY CURRENTS-I:	<ol> <li>Ultrasound Therapy Unit (UST): Ultrasound therapy Unit (UST), Production, Physiological &amp; Therapeutics effects, Principle of application of Ultrasound therapy, Methods of Application of UST, phonophorosis, effects, indications, contraindications, precautions, and patient preparation.</li> <li>Long Wave Diathermy (LWD): Long Wave Diathermy (LWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Long Wave Diathermy, Methods of Application of LWD, effects, indications, contraindications, precautions, and patient preparation.</li> <li>Extracorporeal Shock Wave Therapy (ECSWT): `Brief overview.</li> </ol>	8	CO3
4	HIGH FREQUENCY CURRENTS- II:	<ol> <li>Shortwave Diathermy (SWD): Shortwave Diathermy (SWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Shortwave Diathermy, Methods of Application of SWD, types of electrodes, effects, indications, contraindications, precautions, dangers and patient preparation</li> <li>Micro Wave Diathermy (MWD): Micro Wave Diathermy (MWD), Production, Physiological &amp; Therapeutics effects, Principle of application of Microwave Diathermy, Methods of Application of MWD, effects, indications, contraindications, precautions, dangers and patient preparation.</li> </ol>	8	CO4
5	ELECTRO PHYSICAL AGENTS	<ol> <li>Cryotherapy: Cryotherapy (CT), Principle of Cryotherapy, Physiological effects, Methods of Application of Cryotherapy. Principle of clinical application, effects, uses, indications, contraindications, precautions, and patient preparation. Theories of pain relief by Cryotherapy.</li> <li>Paraffin Wax Bath: Paraffin wax bath, Principle of application of Paraffin wax bath, Physiological effects, Methods of Application of PWB, effects, uses, indications, on traindications, precautions, and patient preparation.</li> <li>Hydro-collator Bath: Hydro-collator Bath, Principle of application of Hydrocollatar Bath, Physiological effects, Methods of Application of Hydro-collator Bath, effects, uses, indications, contraindications, precautions, and patient preparation.</li> <li>Electrical Heating Pads: Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, Physiological effects, Methods of Application of Electrical heating pads, effects, uses, indications, contraindications, precautions, and patient preparation.</li> </ol>	8	CO5
Refer	ence Books:			
1. Clay $2$ Ela	yton's Electrotherap	by (theory and practice) – Clayton's AIBS publications.		
2. Elec	ctical in Electrother	apy by Joseph Kahn. Churchill livingstone.		
4. Ele	ctrotherapy: Evide	nce Based Practice by Kitchen Sheild, 11th ed.		
5. Phy	sical Agents in Re	habilitation: From Research to Practice by Cameron.		

- e-Learning Source: https://youtu.be/PqbRvPLg-nsffghgg 1. 2. https://youtu.be/P11P0BVTU\_s https://youtu.be/TDCKqKMSrUw https://youtu.be/iPXVdTCMktM 3.
- 4.

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	POQ	PO10	PO11	PO12	DSO1	DSO3	DSO3	DSO/	DSO5
CO	2	102	105	104	105	100	107	108	109	1010	1011	1012	1301	1302	1305	1304	1505
CO1	3	3	1	2	-	1	-	1	-	2	-	2	3	2	2	2	1
CO2	1	3	-	3	-	1	-	1	-	3	-	3	2	1	1	3	2
CO3	2	3	1	2	-	1	-	1	-	2	-	3	3	2	1	3	1
CO4	1	3	-	3	-	-	-	1	-	3	-	2	2	2	2	3	2
CO5	2	3	-	2	-	1	-	1	-	2	-	3	2	1	1	2	1

Course Code	Course Title		Attributes									
PT204		Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional				
	ELECTROTHERAPY	yability	neurship	Development	Equality	Sustainability	Value	Ethics				
		1	1	1	4		1	1	3,4,9			



Effective from Session: 2016-17												
Course Code	PT205	Title of the Course	SURFACE ANATOMY AND PALPATION SKILLS	L	Т	Р	С					
Year	II	Semester	III	3	1	0	4					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	About the relating to	reviews the surface an major extremity joints,	atomy and provide an organized approaches for locating osseous a , (foot/ ankle, knee, hip, shoulder girdle, elbow and wrist/hand) and	nd sof all re	t tissue gions o	landm f the sp	iark pine					
	ly for examination.											

	Course Outcomes								
CO1	To give the overview about the palpatory process.								
CO2	To make the students familiar to the different term related to the surface anatomy.								
CO3	To make the students familiar to the different term related to the surface anatomy.								
CO4	To make understand to the students about different anatomical landmark Shoulder girdle, Elbow and wrist.								
CO5	To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot.								

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO				
1	INTRODUCTION OF SURFACE ANATOMY & PALPATION SKILLS	Terminology related to surface anatomy, and palpation skill. Principle of surface marking and palpation. Types of palpation and its uses in assessment. Ethical and legal issues regarding palpation techniques.	8	C01				
2	LANDMARK LOCATION AND PALPATION SKILL OF SPINE	Landmark location and palpation skill of Lumbo-pelvic region. Landmark location and palpation skill of Thoracic Spine. Landmark location and palpation skill of Cervical and Occipital region.	8	CO2				
3	LANDMARK LOCATION AND PALPATION SKILL OF U/E	Landmark location and palpation skill of Shoulder Girdle. Landmark location and palpation skill of Elbow. Landmark location and palpation skill of Wrist & Hand	8	CO3				
4	LANDMARK LOCATION AND PALPATION SKILL OF L/E	Landmark location and palpation skill of Foot & Ankle. Landmark location and palpation skill of Knee. Landmark location and palpation skill of Hip.	8	CO4				
5	BASIC POSTURAL OBSERVATIONAL SKILL	BASIC POSTURAL       Normal body alignment, symmetry and plumb line. Observation of static and dynamic         OBSERVATIONAL       posture in various positions (sitting, standing & walking) and gait.         SKILL       SKILL						
Refere	nce Books:							
1. A l	Manual Therapist Guide to	Surface anatomy and Palpation Skills by David Bayfield & Stuart Kinsinger.						
2. Or	Inopaedics Physical Assessi	nent. By D Magee.						
4. Hu	man Anatomy by B.D. Cha	urasiva- All 3volumes						
e-Lea	arning Source:							
1. <u>http</u>	os://youtu.be/ZyLCrf44i48							
2. <u>http</u>	os://youtu.be/L6y1yE2N8hI							
3. <u>http</u>	os://youtu.be/dCzuLb3Cng8							
4. <u>http</u>	os://youtu.be/Jey2R9urbOM							

		Course Articulation Matrix: (Manning of COs with POs and PSOs)														
						Course	e Alucu	ation wi	atrix: (IVI	apping of		r Os anu r e	iUS)			
PO-PSO	PO1	PO2	PO3		PO5	PO6	PO7	POS		<b>PO10</b>	PO11	PO12	DSO1	DSO3	DSO4	DSO5
СО	101	102	105	104	105	100	107	108	109	1010	1011	1012	1301	1302	1304	1305
CO1	1	3	2	3	2	1	-	1	-	2	-	2	1	2	2	-
CO2	2	3	3	3	3	1	-	1	-	3	-	3	3	3	1	2
CO3	3	2	3	3	2	2	-	2	-	2	-	2	3	3	2	3
CO4	2	3	3	3	3	1	-	1	-	3	-	2	3	3	2	2
CO5	2	3	3	3	3	1	-	1	-	2	-	3	2	3	2	-

Course Code	Course Title		Attributes										
	SURFACE	Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional					
PT205	ANATOMY AND	yability	neurship	Development	Equality	Sustainability	Value	Ethics					
	PALPATION SKILLS	1	4	4	1		*	*	3,4				



Effective from S	ession: 2016-17	7							
Course Code	PT206	Title of the Course	PSYCHOLOGY & EXPERIMENTAL PSYCHOLOGY	L	Т	Р	С		
Year	II	Semester	III	3	1	0	4		
Pre-Requisite	Nil	Co-requisite	Nil						
	Be able to defi	e able to define the term Psychology & its importance in the Health delivery system, & will gain knowledge of Psychological							
Course	maturation dur	aturation during human development & growth; & alterations during aging process. Be able to understand the importance of							
Objectives	psychological	status of the person in he	alth & disease; environmental & emotional influence on the mind & pe	ersonal	lity. De	scribe i	in		
	brief the variou	rief the various treatment modalities commonly used.							

	Course Outcomes							
CO1	Student able to understand psychology and its branches of along with higher psychological abilities.							
CO2	Student able to understand a process of learning and memory.							
CO3	Student able to learn the behaviour aspect which influences the persons personalities for executing various tasks							
CO4	Student able to understand life span development as how its effects human behaviour.							
CO5	Student able to understand the various theories of coping mechanism like clients centered approach.							

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	INTRODUCTION TO PSYCHOLOGY	Definition, application and methods in psychology, Biology of Behavior, Sensory processes and perception, Principles of learning, Classical and Instrumental Conditioning, Cognitive learning, Memory, long and short – term memories, forgetting, amnesia.	8	CO1
2	THINKING AND LANGUAGE	Thinking and Language, Concepts, thinking process, problem- solving and decision making, creative thinking and language communication, Motivation, Biological and Social motives, frustration and conflict of motives, motives to know and be effective, Emotion and Stress, Expression and perception of emotions, physiology and application of emotion.	8	CO2
3	SOCIAL PERCEPTIONS	Social perceptions, influences, and relationships, Attitudes, Nature and measurement of attitudes, Factors in attitude change, Behavior and attitudes.	8	CO3
4	DEVELOPMENT	Development- A Lifespan Perspective (infancy, childhood, adolescence, adult, old age), Personality, Defining and thinking about personality, Theories and issues and controversies and research	8	CO4
5	ABNORMAL PSYCHOLOGY	Abnormal Psychology, Therapy for Psychological distress, Brief description of Psychological assessment and testing.	8	CO5
Referen	ce Books:			
1. Mor	gan C.T., King R. A., Wei eduction to Psychology 7	JZ J. K. Schopler J. thedr. (Tata McGraw-Hill Publishing Co. Ltd.)		
3. Hun	han Development, 5th (Tr	ta McGraw Hill Publishing Co. Ltd		
4. Mur	n N.L. Introduction to Ps	ychology-(Premium Oxford, I.B.P. Publishing Co.)		
e-Lear	ning Source:			
$1. \frac{\text{htt}}{2}$	tps://youtu.be/P3FKHH2R	<u>zj1?list=PL6A08EB4EEFF3E91F</u> 15w		

3. https://youtu.be/7h9LnLFCk\_Q

		Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	DO1	DOJ			DO5	DOG	DO7	DOS	DOO	DO10	DO11	DO12	DSO1	DSOJ	DSO2	DSO4	DSOS
CO	FUI	FO2	F03	F04	FUS	FUU	FO/	FUo	F09	FOID	FOIL	F012	1301	F302	1303	F304	1303
CO1	3	-	-	1	-	1	-	3	2	-	-	2	-	-	2	-	2
CO2	2	-	-	3	-	2	1	1	3	-	1	3	-	-	3	-	3
CO3	3	-	-	-	-	1	1	2	2	-	2	2	-	-	3	-	2
CO4	3	-	-	-	-	1	-	1	1	-	1	3	-	-	2	-	1
CO5	2	-	-	-	-	1	-	3	2	-	-	2	-	-	2	-	1

Course Code	Course Title				Attribut	es			SDGs No.
	PSYCHOLOGY &	Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional	
PT206	EXPERIMENTAL	yability	neurship	Development	Equality	Sustainability	Value	Ethics	
	PSYCHOLOGY	1		1	1		1	1	3,4



Effective from Sessio	Effective from Session: 2016-17							
Course Code	PT207	Title of the Course	EXERCISETHERAPY LAB	L	Т	Р	С	
Year	II	Semester	Ш	0	0	4	2	
Pre-Requisite	Nil	Co-requisite	Nil					
Course Objectives	This course involves a detailed study of physiological effects, principles, application techniques, effects, indications, and contra-							
Course Objectives	indications and preca	utions for exercises use	d in Physiotherapy.					

	Course Outcomes
CO1	The student will understand about various fundamental and derived positions and their effects and its importance.
CO2	To understand the type of goniometer in order to rule out Hypomobility cases used to improve the mobility of joint
CO3	The student will understand about the various pathological condition associated with myofascial problem restricting the joint mobility and
	helps them to learn various effect of strengthening.
CO4	The student will understand about the various equipment used as a therapeutic gym in designing the exercises associated with musculoskeletal
	and Neurological problem.
CO5	The student understands about the human posture and gait that usually come into existence after the pathological condition.

Experiment No.	Title of the Experiment	Content of Unit	Contact Hrs.	Mapped CO
1	FUNDAMENTAL AND DERIVED POSITIONS.	Position of joints, muscle work, and stability of various fundamental and derived positions. Different types of muscle contraction, muscle work, group action of muscles and coordinated movement.	8	CO1
2	GONIOMETRY	Measurement of ROM of joints- upper limb, lower limb and trunk.	8	CO2
3	MMT & STRENGTH TRAINING	To practice the grading of muscle strength region wise upper limb and lower limb and trunk. Various techniques and modes of progressive strengthening exercises of muscles region wise	8	CO3
4	SUSPENSION & THERAPEUTIC GYMNASIUM	Various types of suspension therapy and its applications on various part of body-region wise. Structure and functions along with application of various equipment in a gymnasium	8	CO4
5	GAIT , POSTURE & AMBULATORY TRAINING	Use of various ambulation aids in gait training. Evaluate ADLs and practice various training techniques. Normal and abnormal posture & practice various corrective techniques. Plan & practice program for normal person of various age groups Demonstration of phases of gait, abnormal gait	8	CO5
Reference Boo	oks:			
1. Kisner and 2. Gardiner, I 3. Norkins & 4. Wood - W	Colby. F.A. Davis, Therapeuti Principle of Exercise Therapy, White F.A. Davis, Measureme B. Saunders, Beard's Massage	c Exercises Foundations and Techniques C.B.S. Delhi nt of Joint Motion: A Guide to Goniometry		
e-Learning S	Source:			
1. <u>https://you</u> 2.https://you	tu.be/62pbuevDbr4 tu.be/33JucSf61n0			
3.https://you	tu.be/1u6d1CX709c			
4. <u>https://you</u>	<u>ıtu.be/pXv_jhViUVo</u>			

		Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
СО	101	102 105	105	104	105	100	107	100	10)	1010	1011	1012	1501	1502	1505	1504	1505
CO1	1	2	2	1	2	1	1	1	1	-	-	2	2	2	1	-	1
CO2	2	2	3	2	3	1	1	1	-	2	1	1	2	2	2	3	2
CO3	1	3	3	2	3	2	1	2	-	2	-	1	3	3	1	3	1
CO4	2	2	2	1	2	1	1	1	2	-	-	2	3	2	2	2	1
CO5	1	3	3	3	3	1	2	1	1	2	-	2	3	3	3	3	2

Course Code	Course Title				Attribut	es			SDGs No.
PT207	EXERCISETHERAPY	Emplo vability	Entrepre neurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
11207	LAB	√	√ .	√Î	Î 1		1	1	3,4, 9



Effective from Session: 2016-17										
Course Code	PT208	Title of the Course	ELECTROTHERAPY-LAB	L	Т	Р	С			
Year	II	Semester	III	0	0	4	2			
Pre-Requisite	Nil	Co-requisite	Nil							
Course Objectives	Acquire the skill of an ability to select t	cquire the skill of Application of the Electro therapy modes on models, for the purpose of Assessment & Treatment. Acquire a ability to select the appropriate mode as per the tissue specific & area specific application.								

	Course Outcomes
CO1	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
CO2	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
CO3	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients
CO4	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of application,
	contraindications of the various radiation equipments.
CO5	Know the principles, technique and effects of electrotherapy as a superficial therapeutic modality.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO						
1	BASIC OF CURRENTS & LOW FREQUENCY CURRENTS	<ul> <li>Sensory and motor stimulation of nerves and muscles by various types of low frequency currents on self.</li> <li>Locate and stimulate different motor points region wise, including the upper and lower limb, trunk &amp; face.</li> <li>Therapeutic application different low frequency currents faradic foot bath, faradism under pressure,</li> <li>Iontophoresis</li> </ul>	8	CO1						
2	MEDIUM FREQUENCY CURRENTS	<ul> <li>TENS Stimulator, its operation and application - region wise.</li> <li>IFT-Its operation and application –region wise.</li> </ul>	8	CO2						
3	HIGH FREQUENCY CURRENTS-I	<ul> <li>Short wave diathermy unit, its operation and different methods of application - region wise.</li> <li>Microwave diathermy unit, its operation and different methods of application - region wise.</li> </ul>	8	CO3						
4	HIGH FREQUENCY CURRENTS-II	<ul> <li>Long wave therapy unit, its operation and different method of application- region wise.</li> <li>Ultrasound unit, its operation and methods of application - region wise.</li> </ul>	8	CO4						
5	ELECTRICAL REACTIONS ELECTRO- DIAGNOSTICTESTS	<ul> <li>Hydrocollatar bath unit, its operation and different method of application- region wise.</li> <li>Paraffin wax bath unit, its operation and different method of application- region wise.</li> <li>Various forms of therapeutic cold application region wise including ice, cold packs, vapocoolant sprays, etc.</li> </ul>	8	CO5						
Referen	nce Books:									
1. Clayt	ton's Electrotherapy									
2. Clin	ical Electrotherapy- Nelson and	Currier								
3. Elec	trotherapy Explained- Low and I	Keed								
4. Elec	rotherapy in Renabilitation-Mer	yi Kolin Genn								
6 Basic	r of Electrotherapy by Basant Ku	ini imar Nanda								
e-Learning Source:										
1. http	os://youtu.be/FUEow aFy-4									
2. http	os://youtu.be/Jzcw5YCjgN4									
3. <u>htt</u>	os://youtu.be/G2Mo46eLAFs									
4. httr	os://voutu.be/DeEnKiB6JvM									

						С	ourse A	rticula	tion Mat	trix: (Map	oping of C	Os with I	POs and P	SOs)				
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	POS	POQ	PO10	PO11	PO12	DSO1	DSO2	PSO4	DSO3	PSO4	DSO5
СО	101	102	105	104	105	100	107	108	109	1010	1011	1012	1301	1302	1504	1305	1504	1305
CO1	3	3	1	2	-	1	-	1	-	2	-	2	3	2	2	2	1	3
CO2	2	3	-	3	-	2	-	1	-	2	-	3	2	1	1	3	2	2
CO3	2	3	1	2	-	1	-	1	-	2	-	3	3	2	1	3	1	2
CO4	1	3	-	2	-	-	-	1	-	3	-	3	2	1	2	3	2	1
CO5	1	3	-	2	-	1	•	1	-	2	-	3	2	1	1	2	1	1
				1 I	ow Co	nrolati	on: 2	Modor	oto Cor	molation	· 2 Subc	tontial (	annoloti					

Course Code	Course Title				Attribut	es			SDGs No.
	EI ECTROTHER ADV	Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional	
PT208	LAB	yability	neurship	Development	Equality	Sustainability	Value	Ethics	
		V	1	1	1		1	1	3,4, 9



Effective from Sessio	Effective from Session: 2016-17												
Course Code	PT 209	Title of the Course	SURFACE ANATOMY & PALPATION SKILLS LAB	L	Т	Р	С						
Year	II	Semester	III	0	0	2	1						
Pre-Requisite	Nil	Co-requisite	Nil										
Course Objectives	This course involves a detailed study of Surface anatomy of Human body, Palpation Skill, indications, and contra-inconcentration for palpation during the assessment in Physiotherapy												

	Course Outcomes
CO1	Introduction of Surface Anatomy & Palpation Skills: To give the overview about the palpatory process.
CO2	Landmark Location and Palpation Skill of Spine: To make the students familiar to the different term related to the surface anatomy.
CO3	Landmark Location and Palpation Skill of U/E: To make the students familiar to the different term related to the surface anatomy.
CO4	Landmark Location and Palpation Skill of L/E: To make understand to the students about different anatomical landmark Shoulder girdle, Elbow
	and wrist.
CO5	Basic Postural Observational Skill: To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot.

Exper iment No.	Title of the Experiment	Content of Unit	Contact Hrs.	Mapped CO							
1	Introduction of Surface Anatomy & Palpation Skills	To give the overview about the palpatory process used in the decision making for patient assessment in diagnostic as well as prognostic	4	CO1							
2	Landmark Location and Palpation Skill of Spine	To understand about anatomical term related to the surface anatomy used as a diagnostic land mark to evaluate the patient problem associated with the different sign and symptoms.	4	CO2							
3	3 Landmark Location and Palpation Skill of U/E To understand surface anatomy used as a diagnostic land mark to evaluate the patient problem mostly related with musculoskeletal pain and client centered problem.										
4	Landmark Location and Palpation Skill of L/E	Location and Skill of L/ETo understand about term related with lower extremity used as a diagnostic land mark to evaluate root cause of the patient problem.									
5	Basic Postural Observational Skill	To make understand to the students about different anatomical landmark of Hip, Knee, Ankle and Foot	4	CO5							
Referen	ce Books:										
1. A N	Ianual Therapist Guide to Surfac	e anatomy and Palpation Skills by David Byfield & Stuart Kinsinger. 2									
2. Orth	opaedics Physical Assessment. I	By D Magee. 3. An Introduction of fundamental Anatomy by David Sinclair.									
3. An I	ntroduction of fundamental Ana	tomy by David Sinclair.									
4. Ana	tomy of Chaurasiya- All 3 volun	les.									
e-Lear	https://woutu.ba/dCzuLb2Cpg										
<u>IIIIps://youtu.be/Iev/ReurbOM</u> <u>IIIIps://youtu.be/Iev/ReurbOM</u>											
3. https://youtu.be/7jA6dkaXYoo											
4.	https://youtu.be/-b MAa6Rk	wk									
5.	5. https://youtu.be/XrOP3AeDijM										

					0	Course 4	Articul	ation M	latrix: (	Mappin	g of COs	with PO	s and PS	Os)			
PO-PSO	PO1	PO2	DO3		PO5	PO6	PO7	POS		<b>PO10</b>	PO11	PO12	DSO1	DSO2	DSO3	DSO/	DSO5
СО	101	102	105	104	105	100	107	100	109	1010	1011	1012	1301	1302	1305	1304	1305
CO1	1	1	2	3	2	1	-	1	-	2	-	2	1	2	2	-	3
CO2	2	3	3	3	3	1	-	1	-	3	-	3	3	3	1	2	2
CO3	3	2	3	2	2	2	-	2	-	2	-	2	3	3	2	3	1
CO4	2	3	3	3	3	1	-	1	-	3	-	2	3	3	2	2	1
CO5	2	3	3	3	3	1	-	1	-	2	-	3	2	3	2	-	2

Course Code	Course Title				Attribut	es			SDGs No.				
	SURFACE	Employ ability	Entrepren eurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics					
РТ209	PALPATION SKILLS LAB	4	4	1	1		4	4	3,4				



# **INTEGRAL UNIVERSITY, LUCKNOW** INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES & RESEARCH

# **DEPARTMENT OF PHYSIOTHERAPY**

# BACHELOR OF PHYSIOTHERAPY (BPT) SYLLABUS

YEAR/ SEMESTER: II/IV



Effective from Sessio	on: 2016-17	Effective from Session: 2016-17											
Course Code	PT210	Title of the Course	GENERAL MEDICINE	L	Т	Р	С						
Year	II	Semester	IV	2	1	0	3						
Pre-Requisite	Nil	Co-requisite	Nil										
Course Objectives	Be able to describe	Be able to describe Etiology, Pathophysiology, Signs & Symptoms, and Clinical Evaluation & Management of the various											
Course Objectives	Rheumatologic Cardiovascular & Respiratory Conditions.												

	Course Outcomes
CO1	Cardio-Vascular and Hematology: Demonstrate a general understanding of the Cardio-Vascular diseases that therapists would encounter in their practice.
CO2	Respiratory System: Student able to understand about obstructive and restrictive ling diseases like COPD, Asthama, Bronchitis etc.
CO3	Disturbances in Water, Electrolyte and Acid-Base Balance: Student able to understand about disorder related to electrolyte imbalance like diarrhea, Ascitis etc.
CO4	Endocrine and Rhematological Conditions: Student able to understand about the conditions and disorders related to hormonal imbalance.
CO5	Skin and Psychiatry: Student able to understand about the skin and psychiatry disease like psoriasis, acne, eczema and obsessive compulsive disorder,
	dementia delirium etc.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO						
1	CARDIO- VASCULAR AND HEMATOLOGY	Hypertension–systemic, I.H.DMyocardial infarction Arrhythmia-classification, Valvular Heart Disease a) Congenital b) Acquired, Rheumatic Fever, Congenital Heart Disease, Infective Endo Carditis, Geriatric Cardio Vascular Problems & management, ECG – Normal & Variations due to ischemia & infarction. Anaemia, Leucopenia, Leucocytosis, Thrombocytopenia, DVT, Thrombotic disorders, Jaundice (Hemolytic).	6	CO1						
2	RESPIRATORY SYSTEM	Common Infectious diseases like Tuberculosis Pneumonia, Lung Abscess, Bronchiectasis Tumors of the lung and bronchus, Diseases of the nasopharynx, larynx, trachea, Diseases of Pleura like Pleural Effusion, Pneumothorax, Hydro pneumothorax, Empyema, Occupational lung diseases (like Silicosis Asbestosis, Pneumoconiosis, Brucellosis, Farmer's Lung ) Obstructive Lung Diseases( like Bronchitis, Emphysema, Bronchial Asthma, Cystic Fibrosis), Interstitial Lung Diseases, Geriatric respiratory problems & management, Intensive Medical Unit- Infrastructure & Treatment (2hrs), Introduction of clinical examination, Breath sounds / X ray chest /Blood gas analysis / P.F.T	6	CO2						
3	DISTURBANCES IN WATER, ELECTROLYTE AND ACID-BASE BALANCE	Physiology of water and electrolytes, Renal failure (Acute and Chronic), Electrolyte imbalance: hypernatremia, hyponatremia, hyperkalaemia, hypokalaemia, sodium and water excess, calcium, phosphate and magnesium disorders, Acid-Base balance-metabolic acidosis and alkalosis, respiratory acidosis and alkalosis mixed acid – base disorders	6	CO3						
4	ENDOCRINE AND RHEMATOLOGI CAL CONDITIONS	Endocrine System Thyroid, Parathyroid, Pituitary and Adrenal conditions, Diabetes, Calcium metabolism. Rhematological Conditions Osteoarthritis, Rheumatoid arthritis, Infectious arthritis, SLE, Gout, Polymyositis, Osteoporosis, Osteopenia.	6	CO4						
5	5       SKIN & PSYCHIATRY       Anatomy of skin, Immunologically mediated skin disorders, Skin disorders in AIDS, immunodeficiency & venereal disease, Brief description of eczematous dermatoses, psoriasis, lichen planus, acne, rosacea, and similar disease, systemic disease, disorders of pigmentation, principles of management of skin diseases.         5       SKIN & PSYCHIATRY         6       Brief description of epidemiology and etiological factors, Classification of psychiatric disorders, Brief description of psychological and physical treatments used, Brief description of clinical syndromes (organic psychiatric disorders, substance abuse, schizophrenia, affective disorders,									
Refer	ence Books:									
1. Prin	ciples & Practical Medi	cine –Davidson								
2. Med 3. Prin	ciple of Internal Medici	vana ne –Harrisson								
4. Prin	ciples & Practical Medi	cine – Kumar &Clarke								
e-Le	e-Learning Source:									
1. <u>htt</u>	ps://youtu.be/rTWx1DE	-kOM								
2. <u>htt</u>	. <u>https://youtu.be/mLmKq5bQOg0</u>									
3. <u>htt</u>	ps://youtu.be/Tz07Uqx7	<u>VY</u>								

4. <u>https://youtu.be/pNn7pICPAvU</u>

		Course Articulation Matrix: (Mapping of COs with POs and PSOs)														
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
СО	101	102	105	104	105	100	107	100	107	1010	1011	1012	1501	1502	1504	1505
CO1	3	3	3	3	-	-	-	-	-	2	-	2	3	3	2	3
CO2	3	3	3	2	-	-	-	-	-	1	-	3	3	3	3	3
CO3	3	3	3	2	-	-	-	-	-	2	-	2	3	2	2	3
CO4	3	3	3	3	-	-	-	-	-	3	-	3	3	3	2	3
CO5	3	3	3	2	-	2	-	-	2	2	-	2	3	2	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title		Attributes									
		Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional				
PT210	GENERAL MEDICINE	yability	neurship	Development	Equality	Sustainability	Value	Ethics				
		1	1	1	1		1	1	3,4			



Effective from Session: 2016-17												
Course Code	PT211	Title of the Course	PHARMACOLOGY	L	Т	Р	С					
Year	II	Semester	IV	2	1	0	3					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy											

	Course Outcomes
CO1	General Pharmacology & ANS: Possess a relevant knowledge in basic principles of pharmacology and its recent advances.
CO2	Autacoids, PNS & Resp. System: Understand the basic pharmacology of common drugs used, their importance in the overall treatment
	including Physiotherapy.
CO3	CVS, GIT & Miscellaneous: Understand the general principles of drug action and the handling of drugs by the body.
CO4	CNS & Hormones: Understand the contribution of both drug and physiotherapy factors in the outcome of treatment
CO5	Anti - Microbial Agents: Learn the various drugs such as Anti-leprotic& Anti-fungal Drugs, Anti-malarial Drugs, Anti-tubercular
	Drugs

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	GENERAL PHARMACOLOG Y & ANS	Routes of Drug Administration, Pharmacokinetics, Pharmacodynamics, Adverse Drug Reactions, Cholinergics & Anti-cholinergics, Adrenergics & Anti-adrenergics	6	CO1
2	AUTACOIDS, PNS &RESP.SYSTEM	Autacoids & Antihistaminics, Drug Therapy of Migraine, NSAIDs, Anti- Gout & Anti- Rheumatoid, SkeletalMuscle Relaxants, Local Anaesthetics, Drug acting on RespiratorySystem	6	CO2
3	CVS, GIT&MISCELLAN EOUS	Anti-anginal Drugs, Anti-hypertensive Drugs, Drugs for Peptic Ulcer, Anti-emetic Drugs, Drugs actingon Kidney, Drugs affecting bleeding &coagulants, Chelating Agents, Anti septics &Disinfectants	6	CO3
4	CNS& HORMONES	General Anaesthesia, Sedatives & Hypnotics, Alcohols, Opioid Analgesics, Insulin & Oral Hypoglycemic Drugs, Corticosteroids, Estrogen, Progestins & OCPs, Calcium Balance	6	CO4
5	ANTI - MICROBIAL AGENTS	Sulphonamides, Quinolones, Beta-lactams, Aminoglycosides, Anti-tubercular Drugs, Anti-leprotic& Anti-fungal Drugs, Anti-malarial Drugs, Anti-amoebic & Anti-helmintic Drugs	6	CO5
Referen	ce Books:			
1. Dr. K.	D. Tripathi Jaypee, Esse	ntial of Medical Pharmacology, Brothers Medical Publishers.		
2.Gaddu 3 Dr R 9	m Gaddum s Pharmacolo S Satoskar & Dr S D B	y handarkar, Pharmacology & Pharmacotheraneutics Revised 19th Edition 2005 by Popular Prakasha	n	
4. Krantz	x, &Carr, Pharmacology	principle of Medical practice, Williams & Wilkins.		
5.Goodr	nan Pharmacological bas	is of Therapeutics, L. S. Gilman A		
e-Lear	ning Source:			
1. <u>https</u>	://youtu.be/a01WFQvQK	<u>w8</u>		

<u>https://youtu.be/qhiMmNZjHRg</u>
 <u>https://youtu.be/-znHCAu5OnY</u>
 <u>https://youtu.be/t2tKyjj7u5Y</u>

					C	ourse A	rticulatio	on Matrix	x: (Mapp	ing of CO	s with PO	s and PSO	s)			
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	POS	POQ	PO10	PO11	PO12	PSO1	PSO2	PSO/	PSO5
СО	101	102	105	104	105	100	107	100	10)	1010	1011	1012	1501	1502	1504	1505
CO1	2	3	-	-	-	-	-	-	-	-	-	1	3	-	1	-
CO2	3	3	-	-	-	2	-	-	-	-	-	-	3	3	2	3
CO3	2	3	-	-	-	2	-	-	-	-	-	1	3	2	1	3
CO4	3	3	-	-	-	-	-	-	-	-	-	-	2	3	2	2
CO5	3	3	-	-	-	3	-	1	-	-	-	-	3	3	2	3

			1100	Ibutes & DD OS								
Course Code	Course Title		Attributes									
		Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional				
PT211	PHARMACOLOGY	yability	neurship	Development	Equality	Sustainability	Value	Ethics				
		1		√	1		*	*	3,4			



Effective from Session: 2016-17												· ·					
Cou	rse Code	e		PT212	Tit	le of the	Course	•		THE	RAPEU	<b><u>FIC TEC</u></b>	CHNIQUE	S	L	Т	P C
Year	Doctorio	-	NT.	1	Sen	nester	to	NT1				IV			3	1	0 4
Pre-	Requisit	te otivoa	N1	l omonstre	CO-	-requisit	te sofoly (	N1l	d usa aa	uinmon	taamma	nly found	in physica	1 thoropy ali	nios		
Cou	rse Obje	ectives	D	emonsua	ate the a	tointy to	salely s	setup and	u use eq	urpmen	t commo	iny tound	in physica	i ulerapy ch	ines.		
	-								Course	Outcor	nes						
C01	Soft T	issue M	lobilizati	ion: Physi	ological	effects of	f soft tiss	ue manip	ulation of	on the fol	lowing sys	stem of the	e body - circu	ilatory, nervou	18.		
CO2	Mobil	ization	Techniq	ue: aetiog	genesis o	of joint s	tiffness,	general t	echnique	e of mot	oilization,	effects, in	dication, co	ntraindication	s & precau	tions. Prine	ciple,
CO3	Classi	muscul	of Basic	concept of	of Joint r	Utilize (	on techn	iques	recent i	nethods	and to sel	ect the mo	et appropria	te method to	moderate a	nd alleviat	e pain for
0.05	patien	its	ai Facili		inique.	ounze c	Jontemp	Jary and		nethous	and to ser	eet the life	ist appropria	tte method to	moderate a		e pani ioi
CO4	Aquat	tic Thera	apy & H	ydrothera	py: princ	ciples of l	hydrothe	apy, Phy	siologica	al & ther	apeutic eff	fects of hy	drotherapy, i	including join	t mobility, i	muscle stre	ngthening
005	& woi	und care	e etc.		votion Mussle fations Mussle groom Consul squase and signs symptoms of tansion (mental and abusics)												
005	Specia	al Techr	nques: R	elaxation	axation, Muscle fatigue, Muscle spasm, General causes, and signs, symptoms of tension (mental and physical).												
Unit	Title	of the ]	Unit		Content of Unit											Contact	Mapped
No.	The	or the	omi											Hrs.	CO		
1	SOF MOBI	T TISS ILIZAT	UE 'ION	History massag Physiol nervous the pat manipu of streta Technic	Istory & importance of various types of soft tissue manipulation technique (Massage). Define nassage, Classify and describe the techniques of stroking, effleurage, petrissage & tapotment. 'hysiological effects of soft tissue manipulation on the following system of the body- circulatory, ervous. Musculoskeletal, excretory, respiratory, Integumentary system and metabolism. Preparation of he patient, Preparation of the therapist, effect uses, indication and contraindication of the above nanipulation techniques. Stretching: Definition of stretching; classification of stretching, Determinants of stretching exercise, Effects of stretching, Precautions, indications and contraindications of stretching. Fechniques of stretching for group & individual muscles, Dosimetry of stretching.											8	CO1
2	MOBI TEC	LIZAT HNIQ	TION UE	Joint m contrain techniq exercise indicati	echniques of stretching for group & individual muscles, Dosimetry of stretching. oint mobility: aetiogenesis of joint stiffness, general technique of mobilization, effects, indication, ontraindications & precautions. Principle, classification of Basic concept of Joint mobilization echniques, physiological and therapeutic effects, indication and contraindication of therapeutic xercises. Introduction to special mobilization & manipulation techniques, effects indications, effects, ndications & contraindications											8	CO2
3	NEURO R FAC TEC	OMUS( IILITA' CHNIQ	CULA FION UE	Neuron neurom exercise techniq includin	Neuromuscular incoordination: review normal neuromuscular coordination, aetiogenesis of neuromuscular incoordination & general therapeutic techniques to improve coordination–Frenkle exercise, effects, indication contraindication & precautions, Functional re- education general therapeutic techniques to re- educate ADL functions. Static & dynamic balance: assessment & management including therapeutic exercises										8	CO3	
4	AQ THE HYDRO	QUATI ERAPY OTHEI	C ' & RAPY	Basic p therape Physiol wound indicati	vrinciple utic ef ogical o care e ons, and	es of flui fects, in & therap etc. Var d contra	d mechandication peutic efficiency ious type indication	anics as n contra ffects of bes of ons oper	they rel aindicat hydroth hydroth ational	ate to A ion of nerapy, erapy e skills &	Aquatic T Aquatic including equipmen patients	herapy. E Therapy g joint m ts (Desc. preparatio	Description 7. Principle obility, mu ription of ons.	of the Physi es of hydro scle strength the Various	ological, otherapy, nening & s Tank),	8	CO4
5	SF TECI	PECIAI HNIQU	L J <b>ES</b>	Relaxat physica Effect, therapy	tion, Mu Il). Fact uses au v. Conce	uscle fat tors con nd clinic ptual fra	igue, M tributing cal appl ame wor	uscle sp g to fati lication. k variou	asm, Ge gue and basic j is asana	neral ca tensio principle the boc	auses, and on. Techn es, types ly mind r	d signs, sy iques of advantag elationshi	ymptoms of relaxation ges & disa ip, effects &	f tension (ma (local and advantages of & precaution	ental and general). of Group s.	8	CO5
Refe	rence B	ooks:															
1. Ki	sner and	l Colby	. F.A. I	Davis, Th	erapeut	ic Exerc	ises Fou	indation	s and $\overline{T}$	echniqu	es						
2. Ga	ardiner, I	Princip	le of Ex	ercise T	herapy,	C.B.S.E	Delhi.				- 4						
5. No	orkins&	white	r.A. Da	IVIS, Mea	sureme	nt of Joi	nt Moti	on: A G	uiae to	JONIOM	etry.						
-+. W	endal M	uscle te	esting a	nd functi	ons W	illiams A	Wilkin	S.									
6.Ba	tes and F	Hanson	, Aquat	tic Exerc	ise The	rapy	~ , , 11811	~•									
7.Ma	urgarett H	<u>Holli</u> s, I	Massag	e for the	rapist: N	/argaret	t <u>Hol</u> lis										
8. Ho	ollis, Lab	Exerc	ise The	rapy, Bla	ackwell	Scientif	ic Publi	cations.									
e-L	earning	Sourc	e:	71.61.1.4													
1. <u>h</u>	ttps://you	utu be/		$\frac{100044}{1000000000000000000000000000000$													
$\frac{2}{3}$ h	ttps://you	utu be/	H29°C	REDAVU REPXRM													
J. <u>11</u>	арол/ yUI					~					•			DCC \			
DO	DSO					Cou	irse Art	culatio	n Matr	1x: (Ma	pping of	COs wit	n POs and	PSOs)			
ru	10 10	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
C	01	2	3	-	-	3	-	1	1	-	-	-	1	3	1	-	-
C	02	3	3	-	2	3	-	-	1	-	1	-	2	2	1	1	2
C	03	2	3	3	2	3	-	1	-	-	1	-	1	2	2	1	2
C	04	3	3	-	-	2	1	-	1	1	-	1	2	3	-	1	1
C	05	2	3	-	-	3	2	-	-	2	-	2	2	3	-	-	1
				1	- Low	Correla	tion; 2-	Moder	ate Cor	relation	n; 3- Sub	stantial (	Correlation	n			
								Attribu	ites & Sl	JGS							

Course Code	Course Title				Attribut	es			SDGs No.
	THERAPEUTIC	Emplo	Entrepre	Skill	Gender	Environment &	Human	Professional	
PT212	TECHNIQUES	yability	neurship	Development	Equality	Sustainability	Value	Ethics	
	TECHNIQUES	1	*	1	1		*	1	3,4,9



Effective from Sessio	n: 2016-17										
Course Code	PT213	Title of the Course	ELECTROTHERAPY & ELECTRODIAGNOSIS	L	Т	Р	С				
Year	II	Semester	IV	3	1	0	4				
Pre-Requisite	Nil	Co-requisite	Nil								
<b>Course Objectives</b>	Demonstrate the ability to safely setup and use equipment commonly found in physical therapy clinics.										

	Course Outcomes
CO1	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions
CO2	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
CO3	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients
CO4	Aware of the construction, Biophysical principles and effects , dangers, safety measures, judicial use, appropriate methods of application , contraindications of
	the various radiation equipments.
CO5	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in condition like nerve
	injuries. Possess knowledge of all the commonly used electro diagnostic tests like Electromyography, nerve conduction study in relevant conditions.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	THERMAL AGENTS-II	<ul> <li>Contrast Bath Therapy: Contrast Bath Therapy (CBT), Principle of CBT, Physiological effects, Methods of Application of CBT. Principle of clinical application effects, uses, indications, contraindications, precautions, and patient preparation.</li> <li>Whirlpool bath Therapy: Whirlpool bath Therapy (WBT), Principle of application of WBT, Physiological effects, Methods of Application of WBT, effects, uses, indications, contraindications, precautions, and patient preparation.</li> <li>Fluidotherapy: Fluidotherapy (FDT), Principle of application of FDT, Physiological effects, Methods of Applications, contraindications, precautions, and patient preparation.</li> </ul>	8	CO1
2	ACTINOTHERAPY	<b>Ultra-violet rays (UVR):</b> Ultra-violet rays (UVR), Wave Length, frequency, types & sources of UVR generation, technique of irradiation, physiological & therapeutic effects. Dosimetry of UVR. <b>Infra red rays (IRR):</b> Infra red rays-Wavelength, frequency, types & sources of IRR generation, technique of irradiation, physiological and therapeutic effects	8	CO2
3	THERAPEUTIC LIGHT IN PHYSIOTHERAPY	History & Principle of Light Amplification of Stimulation Emission and Radiation (LASER), types of LASER, pulse widths, frequencies & intensities used as LASER applications. Principle of clinical application effects & uses, indications, contraindications, precautions, and operational skills of equipment & patient preparation. Theories of pain relief by LASER. <b>Extracorporeal Shock Wave Therapy:</b> History & Principle of Shock Wave Therapy, types of Shock Wave Therapy, Principle of clinical application effects & uses, indications, contraindications, precautions, and operational skills of equipment & patient preparation.	8	CO3
4	INTERMITTENT COMPRESSION DEVICES(ICD)	<b>Intermittent Compression devices(ICD):</b> Definition, & Principle of application of ICD, Physiological effects, Methods of Application of ICD, effects, uses, indications, contraindications, precautions, and patient preparation. Different kind of others ICD, used in Physiotherapy, Their Principal of application, Physiological effects, Indication, contraindication, Precaution.	8	CO4
5	ELECTRICAL REACTIONS ELECTRO- DIAGNOSTIC TESTS	Electrical Stimuli and Electrical Properties of Nerve and muscle tissue. Types of lesion and development of reaction of degeneration. Basics of S.D. Curve and its interpretation, Chronaxie, Reobase & pulse ratio. Basic of NCV tests, Basic of EMG.	8	CO5
Ref	erence Books:			
1.0	Layton selectrotherapy Electrotherapy Explained-1	ow and Reed		
4.1	Electrotherapy in Rehabilita	tion-Meryl Roth Gerth		
5.I	Electrotherapy Explained-S	heela Kitchen		
6.I	Basic of Electrotherapy by	Basant Kumar Nanda		
e-	Learning Source:			
1.	https://youtu.be/FUE0W	<u>' ary-4</u> TigN4		
3.	https://youtu.be/G2Mo46	beLAFs		
4.	https://youtu.be/DeEnKi	B6JvM		

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	DO1	DOJ	DO3		DO5	DOG	DO7	DOS	DO0	DO10	DO11	DO12	DSO1	DSOJ	DSO4	DSO5
CO	rui	FO2	F05	r04	FUS	F00	FO/	F08	F09	F010	FOII	FO12	1301	F302	r304	1303
CO1	1	3	-	2	-	1	-	1	-	2	-	3	3	-	1	1
CO2	1	2	-	2	-	-	-	1	-	3	-	3	3	1	2	2
CO3	2	3	-	2	-	-	-	-	-	3	-	2	2	3	2	3
CO4	1	2	-	3	-	-	-	1	-	2	-	2	2	1	2	1
CO5	1	2	3	3	-	_	_	_	_	3	_	3	3	3	3	3

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes	& SDGs	

Course Code	Course Title		Attributes						
PT213	ELECTROTHERAPY &	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.
	ELECTRODIAGNOSIS	4	4	1	√		1	1	3,4,9



			0								
Effect	ive from Session	: 2016-17									
Cours	e Code	PT214	Title of the Course	BASIC OF BIOMECHANICS	L	Т	Р	С			
Year		II	Semester	IV	3	1	0	4			
Pre-R	equisite	Nil	Co-requisite	Nil							
<b>Course Objectives</b> Evaluate an understanding of basic biomechanical concepts, including mechanical lever systems, stability, and laws of motion;											
Course Outcomes											
CO1	The student wi	ll be able to understa	nd interaction of mecha	anics with human body as how a different force works in e	xecuti	on of p	oarticu	lar			
	task.										
CO2	To understand l	basics of muscles fun	ction as a result of contr	action to bring joint movement within kinetic and kinematic	specti	rum.					
CO3	Student able to	learn the joint design	gn and its function alor	ng with mechanical properties of different soft tissue with	nin the	scope	of va	rious			
	pathologies and	exercise	0			•					
CO4	The student wil	l learn the basic of co	nnective tissue properti	es and its biomechanics.							
CO5	The student ab	le to learn kinetics a	and kinematics of postu	ure and gait to rule out normal and abnormal deviation a	s a res	sult of	any				
	pathology.		•	-							

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	BASIC CONCEPTS IN BIOMECHANICS	Introduction to Biomechanics and kinesiology and related terminology. Kinematics and Kinetics & their biomechanical importance in Physiotherapy. Application of different Forces & Torque in human body. Application of Lever & Pulley in human body. Clinical & biomechanical importance of COG, LOG, BOS, Equilibrium.	8	CO1
2	MUSCLE STRUCTURE AND FUNCTION	Muscle Attachments, Muscle Names, Muscle Fiber Arrangement Functional Characteristics of MuscleTissue.Length-Tension Relationship in Muscle Tissue: Active and Passive Insufficiency Types of Muscle Contraction & Roles of Muscles .Angle of Pull & Kinetic Chains. Biomechanical of factors Affecting Muscle Function, Effects of Immobilization, Injury, and Aging.	8	CO2
3	JOINT STRUCTURE, FUNCTION AND THEIR BIOMECHANICS	Introduction: Basic Principle of Human Joint design & Joint Function .Materials Found in Human Joints: Structure of Connective Tissue. Brief about Specific Connective Tissue Structures. General Properties of Connective Tissue: Mechanical Behavior, Visco elasticity, Time- Dependent and Rate-Dependent Properties, Properties of Specific Tissues. General Changes with Disease, Injury, Immobilization, Exercise, and Overuse	8	CO3
4	BIOMECHANICS OF SPECIFIC CONNECTIVE TISSUE STRUCTURES	Structure, Function & their biomechanical importance of Ligaments, Tendons, Bursae, Cartilage, Bone.	8	CO4
5	ABNORMAL POSTURE & GAIT	Static and Dynamic Postures, Kinetics and Kinematics of Posture. Analysis of normal and abnormal Standing Posture, Sitting Postures and Lying Postures. Effects of Age, Pregnancy, Occupation, and Recreation on Posture. Kinetics Analysis of Gait: Ground Reaction Force, Centre of Pressure, Internal and External Forces, Moments, and Conventions, Mechanical Power and Work, Muscle Activity. Biomechanical Importance of Abnormal Gait & their Analysis.	8	CO5
Refer	ence Books:			
1. Me	asurement of Joint Motion	n – A Guide to Goniometry - Norkins& White - F. A. Davis.		
3.Clin	ical Kinesiology and Ana	tomy: Fifth Edition Lynn S. Lippert, MS.PT		
4. Bas	sic Biomechanics. Nordin	S.		
5. Bas	sic Biomechanics & clinic	al Kinesiology. Otis		
6. Bio	mechanics of Human Mo	vement. D Winter		
e-Le	earning Source:	ab 4		
$\frac{1}{2}$ , http	os://youtu.be/JJAHGpe0A	VU		
3. http	os://youtu.be/H29sC8fPXI	RM		
4. <u>http</u>	os://youtu.be/gE-5naz8DD	<u>0</u>		
		Course Articulation Matrix: (Mapping of COs with POs and PSOs)		
PC	<b>D-PSO</b> $PO1 PO2$	PO3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PS01 PS02	PSO4	PSO5

		Course Articulation Matrix. (Mapping of Cos with 1 05 and 1 505)														
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
СО	101	102	105	104	105	100	107	100	10)	1010	1011	1012	1501	1502	1504	1505
CO1	1	3	1	1	-	-	-	-	-	1	-	3	1	3	-	2
CO2	-	3	2	-	-	-	-	-	-	-	-	2	2	2	2	1
CO3	-	3	1	-	-	-	-	-	-	1	-	3	1	3	3	1
CO4	-	2	2	-	-	-	-	-	-	-	-	3	1	3	3	1
CO5	-	3	1	-	-	-	-	-	-	1	-	3	1	3	2	1

Course Code	Course Title		Attributes								
PT214	BASIC OF BIOMECHANICS	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics			
		4	4	- 1	1		٧	4	3,4		



Effective from S	ession: 2016-	17											
Course Code	PT215	Title of the Course	ETHICS IN PHYSIOTHERAPY	L	Т	Р	С						
Year	II	SemesterIV200											
Pre-Requisite	Nil	Co-requisite Nil											
	Legal and ethical considerations are firmly believed to be an integral part of medical practice in planning patient care. Advances in												
Course	medical sciences, growing sophistication of the modern society's legal framework, increasing awareness of human rights and												
Objectives	changing mo	hanging moral principles of the community at large, now result in frequent occurrences of healthcare professionals being caught in											
-	dilemmas ox	ver aspects arising from daily practice											

	Course Outcomes
CO1	Understand the history and the ethical principles of physiotherapy profession.
CO2	Learn and differentiate between the confidentiality, informed consent and patient rights
CO3	Elaborate about malpractice, negligence and duties of a medical practitioner.
CO4	Provides basic knowledge on legal responsibility, professional culture and role of different national professional bodies.
CO5	Understand basic principles and concepts of management and administration in clinical and private practice in physiotherapy profession.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	INTRODUCTION	<ul><li>History of Physiotherapy, Philosophy &amp; philosophical statements</li><li>Medical Ethics and code of conduct</li></ul>	4	CO1
2	ETHICS OF TRUST VS ETHICS OF RIGHTS	<ul><li>Basic principles of physiotherapy ethics</li><li>Confidentiality. Autonomy and informed consent. Rights of Patient</li></ul>	4	CO2
3	PROFESSIONAL AND PERSONAL	<ul><li>Malpractice , Negligence and Confidentiality</li><li>Duties of Medical Practioner</li></ul>	4	CO3
4	LEGAL PROFESSIONAL ETHICAL ISSUES	<ul><li>Legal issues</li><li>Consumer protection act</li></ul>	4	CO4
5	PHYSIOTHERAPY PRACTICE	<ul><li>Clinical and Private Practice</li><li>Administration and Management</li></ul>	4	CO5

#### **Reference Books:**

1.Medical Ethics by C. M. Francis

2.Ethical Issues by K. Raja, F. Davis Shivkumar T

3.Consumer Protection Act & The Medical Profession by R. K. Chaube

## 4. Hollis, Lab Exercise Therapy, Blackwell Scientific Publications.

e-Learning Source:

1. https://www.youtube.com/watch?v=bf1Wzy1amuw

<u>https://www.youtube.com/watch?v=jSXwECJ6yi1</u>
 <u>https://www.youtube.com/watch?v=iapU3Oviw\_E</u>

4. <u>https://www.youtube.com/watch?v=uKAsGYS3YMM</u>

				Course Articulation Matrix: (Mapping of COs with POs and PSOs)												
<b>PO-PSO</b> PO1 PO2 PO3 PO4 PO5 PO6 PO7 PO	PO8 PO9	PO10 PO11	PO12	PSO1	PSO2	PSO4	PSO5									
CO																
CO1 1 - 2	2 1		-	-	-	-	-									
CO2 2 - 3	3 2		-	-	-	-	-									
CO3 1 - 2	2 1		-	-	-	-	-									
CO4 2 - 3	3 2		-	-	-	-	-									
<b>CO5</b> 1 - 2	2 2		-	-	-	-	-									

#### 1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title		Attributes									
PT215	ETHICS IN PHYSIOTHERAPY	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	l			
		Employability		Development	Equality	Sustainability	Value	Ethics	l			
		1	1	1	4		1	1	3,4			



Effect	ave from Sessio	n: 2016-17								
Cours	se Code	PT216	Title of the Course	THERAPEUTIC TECHNIQUES LAB	L	Т	Р	С		
Year		II	Semester	IV	0	0	4	2		
Pre-R	lequisite	Nil	Co-requisite	Nil						
Cours	Course Objectives Course involves a detailed study of physiological effects, application techniques, effects, indications, and contra-indications,									
Cours	precautions for exercises used in Physiotherapy.									
	-		Ĺ	Course Outcomes						
CO1	Physiological e	ffects of soft tissue ma	anipulation on the follow	ving system of the body- circulatory, nervous.						
CO2	Aetiogenesis of	f joint stiffness, genera	l technique of mobilizat	ion, effects, indication, contraindications & precautions. Pri	nciple	, classif	ication	of		
	Basic concept of	of Joint mobilization te	chniques	_	_					
CO3	Utilize Contem	porary and recent met	hods and to select the m	ost appropriate method to moderate and alleviate pain for pa	tients					
<b>CO4</b>	04 Principles of hydrotherapy, Physiological & therapeutic effects of hydrotherapy, including joint mobility, muscle strengthening & wound care etc.									
CO5	Relaxation, Mu	scle fatigue, Muscle s	pasm, General causes, a	nd signs, symptoms of tension (mental and physical).						

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO			
1	SOFT TISSUE MOBILIZATION	Preparation of the patient, Preparation of the therapist, effect uses, indication and contraindication of the above manipulation techniques Application of techniques of stretching for group & individual muscles, Dosimetry of stretching.	8	CO1			
2	MOBILIZATION TECHNIQUE	Application of joint mobilization technique on patients on different joints. Introduction to special mobilization & manipulation techniques.	8	CO2			
3	NEUROMUSCULAR FACILITATION TECHNIQUE	Practical Aspects on Neuromuscular in coordination, Functional re-education, Balance.	8	CO3			
4	4 AQUATIC 4 THERAPY & HYDROTHERAPY 4 THERAPY A HYDROTHERAPY						
5	SPECIAL TECHNIQUES	Demonstration on different types of Breathing Exercise. Benefit and demonstration on different types of Group therapy & Yoga.	8	CO5			
Referen	ce Books:						
1. Kisne	r and Colby. F.A. Davis, 7	Cherapeutic Exercises Foundations and Techniques					
2. Gardi 3. Norki	ner, Principle of Exercise	Inerapy, C. B. S. Deini. easurement of Joint Motion: A Guide to Goniometry					
4. Wood	I - W.B. Saunders, Beard's	Massage.					
5. Kenda	al, Muscle testing and fund	ctions, Williams &Wilkins.					
6.Bates	and Hanson, Aquatic Exer	rcise Therapy					
7.Marga	rett Hollis, Massage for th	erapist: Margarett Hollis					
	s, Lao Exercise Therapy, B						
1 https://	//voutu be/IwYK47h5b	h4					
2. https://	//voutu.be/JJAHGpe0A	VU					
3. <u>https:</u>	//youtu.be/H29sC8fPXI	RM					

4. <u>https://youtu.be/gE-5naz8DD0</u>

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
CO	101	102	105	101	105	100	107	100	10)	1010	1011	1012	1501	1502	1501	1505
CO1	1	3	-	-	2	-	1	2	-	-	-	1	2	1	-	-
CO2	2	3	-	2	3	-	-	1	-	1	-	1	2	1	1	2
CO3	1	3	3	2	3	-	1	-	-	1	-	1	2	2	1	2
CO4	3	3	-	-	2	1	-	1	1	-	1	2	3	-	1	1
CO5	2	3	-	-	3	2	-	-	2	-	2	2	3	-	-	1

Course Code	Course Title		Attributes											
PT216	THERAPEUTIC	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.					
	TECHNIQUES LAD	٦	1	1	1		1	1	3,4,9					



Effective from Session:												
Course Code	PT217	Title of the Course	ELECTROTHERAPY & ELECTRODIAGNOSIS LAB	L	Т	Р	С					
Year	II	Semester	IV	0	0	4	2					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	Know the application of physical	principles, technique au techniques, effects, ind agent modalities used i	nd effects of electrotherapy as a therapeutic modality in ourse invo dications, contra-indications, precautions, operational skills of equipt n Physiotherapy	lves a nent, j	detaile patient j	d study prepara	∉ of tion					

### Course Outcomes

CO1	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in
	conditions
CO2	List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their
	effects.
CO3	Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients
CO4	Aware of the construction, Biophysical principles and effects, dangers, safety measures, judicial use, appropriate methods of
	application, contraindications of the various radiation equipments.
CO5	Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in
	condition like nerve injuries. Possess knowledge of all the commonly used electro diagnostic tests like Electromyography,
	nerve conduction study in relevant conditions.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO						
1	THERMALAGENTS-II	<ul> <li>Contrast bath therapy, its operation and methods of application - region wise.</li> <li>Paraffin bath therapy, its operation and methods of application - region wise.</li> <li>Fluidotherapy therapy, its operation and methods of application - region wise.</li> </ul>	8	CO1						
2	ACTINOTHERAPY	• Different types of Ultra violet units, their operation, and assessment of test dose and application of UVR - region wise.	8	CO2						
3	THERAPEUTIC LIGHT IN PHYSIOTHERAPY	• LASER unit, its operation and methods of application - region wise.	8	CO3						
4	INTERMITTENT COMPRESSION DEVICES (ICD)	• Application of ICD in upper limb and lower limb	8	CO4						
5	<ul> <li>5 ELECTRICAL REACTIONS ELECTRO-DIAGNOSTICTESTS</li> <li>• Reaction of degeneration of nerves.</li> <li>• Plot strength duration curves.</li> <li>• Application of EMG biofeedback in different cases.</li> </ul>									
Referen	ice Books:									
1.Clay	ton'sElectrotherapy									
2.Clini 2.Eloct	cal Electrotherapy- Nelson and Currier									
J.Elect	rotherapy in Rehabilitation-Meryl Roth	) Gerth								
5 Elect	rotherapy Explained-Sheela Kitchen									
6.Basic	c of Electrotherapy by Basant Kumar N	Janda								
e-Lea	rning Source:									
1. <u>http</u>	os://youtu.be/FUEow_aFy-4									
2. <u>http</u>	2. <u>https://youtu.be/Jzcw5YCjgN4</u>									
3. <u>httr</u>	3. <u>https://youtu.be/G2Mo46eLAFs</u>									
4. <u>htt</u>	os://youtu.be/DeEnKiB6JvM									

					Cour	se Artic	culation	Matrix	: (Map	ping of C	COs with	POs and	PSOs)			
PO-PSO	DO1	DO3	DO3	DO4	DO5	DOG	DO7	DOS	DOO	<b>DO10</b>	DO11	DO12	DSO1	DSO2	DSO4	DSO5
CO	FOI	FO2	F03	F04	F05	FU0	F07	100	F09	F010	FUIT	FO12	1301	F302	F304	1305
CO1	1	2	-	3	-	2	-	1	-	2	-	2	3	-	1	1
CO2	1	3	-	1	-	-	-	1	-	3	-	3	3	1	3	2
CO3	2	3	-	2	-	-	-	-	-	3	-	2	2	3	2	3
CO4	1	2	-	3	-	-	-	1	-	2	-	2	2	1	2	1
CO5	1	2	3	3	-	-	-	-	-	3	-	3	3	3	3	3
				~			-	~ .		a .						

Course Code	Course Title	Course Title Attributes 5												
PT217	ELECTROTHERAPY	Employability	Entropropourship	Skill	Gender	Environment &	Human	Professional						
	&	Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics						
	ELECTRODIAGNOSIS LAB	4	4	4	4		V	4	3,4,9					



Course Code         PT218         Title of the Course         BASIC OF BIOMECHANICS LAB         L         T         P	Effective from	II DC551011. 2010-17						(				
	Course Code	PT218	Title of the Course	BASIC OF BIOMECHANICS LAB	L	Т	Р	С				
YearIISemesterIV002	Year	II	Semester	IV	IV 0							
Pre-Requisite Nil Co-requisite Nil	<b>Pre-Requisite</b>	e Nil	Co-requisite	Nil								
<ul> <li>Course</li> <li>Objectives</li> <li>• Understand the principles of Biomechanics</li> <li>• Acquire the knowledge of kinetics and kinematics of human body.</li> <li>• Acquire the knowledge of Musculoskeletal movements during normal Gait and Activities of Daily Living</li> <li>• Describe the properties of connective tissue, &amp; effect of mechanical loading, &amp; factors which influence the muscle strength, &amp; Mobility of articular &amp; periarticular soft tissues.</li> </ul>	Course Objectives	<ul> <li>Understand the principle</li> <li>Acquire the knowledge of</li> <li>Acquire the knowledge of</li> <li>Describe the properties Mobility of articular &amp; r</li> </ul>	s of Biomechanics of kinetics and kinematic of Musculoskeletal move of connective tissue, & eriarticular soft tissues	cs of human body. ements during normal Gait and Activities of Daily Living a effect of mechanical loading, & factors which influence	the m	uscle st	rength,	&				

 Course Outcomes

 CO1
 The student will be able to understand interaction of mechanics with human body as how a different force works in execution of particular task.

 CO2
 To understand basics of muscles function as a result of contraction to bring joint movement within kinetic and kinematic spectrum.

 CO3
 Student able to learn the joint design and its function along with mechanical properties of different soft tissue within the scope of various pathologies and exercise

 CO4
 The student will learn the basic of connective tissue properties and its biomechanics.

 CO5
 The student able to learn kinetics and kinematics of posture and gait to rule out normal and abnormal deviation as a result of any pathology.

Unit Contact Mapped

No.	No. Title of the Unit Content of Unit									
1	BASIC CONCEPTS IN BIOMECHANICS	<ul> <li>Understand the principles of Biomechanics.</li> <li>Acquire the knowledge of kinetics and kinematics of human body.</li> </ul>	4	CO1						
2	MUSCLE STRUCTURE AND FUNCTION	<ul> <li>Acquire the knowledge of musculoskeletal movements during normal Gait and Activities of Daily Living.</li> </ul>	4	CO2						
3	<ul> <li>JOINT STRUCTURE,</li> <li>FUNCTION AND THEIR</li> <li>BIOMECHANICS</li> <li>Describe the properties of connective tissue, &amp; effect of mechanical loading, &amp; factors which influence the muscle strength, &amp; mobility of articular &amp; periarticular soft tissues.</li> </ul>									
4	BIOMECHANICS OF SPECIFIC CONNECTIVE TISSUE STRUCTURES	• Practical Aspects of muscle, joint ligaments, Tendon, disc, Bursa etc	4	CO4						
5	ABNORMAL POSTURE & GAIT	<ul><li>Practical analysis of Posture &amp; Gait analysis.</li><li>Practical aspect to demonstrate different types of joints</li></ul>	4	CO5						
Referen	ce Books:									
1. Mea	surement of Joint Motion – A Guide	to Goniometry - Norkins& White - F.A. Davis.								
2. Ther 3 Clinic	apeutic Exercise by Carolyn Kisner,	F. A. Davis. Edition Lynn S. Linnert, MS PT								
4 Basi	c Biomechanics Nordins									
5. Basi	c Biomechanics & clinical Kinesiolog	zv. Otis								
6. Bion	nechanics of Human Movement. D W	Vinter								
e-Lear	ning Source:									
1. <u>http</u>	1. <u>https://youtu.be/JwYK47h5bh4</u>									
2. <u>https</u>	2. <u>https://youtu.be/JJAHGpe0AVU</u>									
5. <u>https://youtu.be/H29SU8IPAKM</u>										
4. <u>nups</u>	://youtu.be/ge-snazaDD0									

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO4	PSO5
СО	101	102	105	101	105	100	10,	100	10)	1010	1011	1012	1501	1502	1501	1505
CO1	1	3	2	1	-	-	-	-	-	1	-	3	1	3	-	2
CO2	-	3	2	-	-	-	-	-	-	-	-	2	2	2	2	1
CO3	-	3	1	-	-	-	-	-	-	1	-	3	1	3	3	1
CO4	-	2	2	-	-	-	-	-	-	-	-	3	1	3	3	1
CO5	-	3	1	-	-	_	-	-	-	1	-	3	1	3	2	1

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs

Course Code	Course Title		Attributes											
PT218	BASIC OF BIOMECHANICS LAB	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	l					
		Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics	l					
		1	1	1	1		1	1	3,4					