

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

# **DEPARTMENT OF PHYSIOTHERAPY**

# BACHELOR OF PHYSIOTHERAPY (BPT) SYLLABUS

YEAR/ SEMESTER: I/I



Effe	Effective from Session: 2022-23 Course Code PT101 Title of the Course HUMAN ANATOMY-I I T P C																	
Cou	rse Cod	le		PT1	01	Title o	f the Co	ourse			HUN	MAN A	NATOM	Y-I		L	Т	P C
Year	r			I		Semes	ter			_		]	[			3	1	0 4
Pre-	Requisi	ite		Ni		Co-ree	<u>quisite</u>		Ni	1	1		1.1.(		1 1		1 . 1	
Cou	rse Obj	ectives		The stu	dent wi		e to den	onstrate	Knowl	eage in	numan ai	natomy a:	s needed 1	or the stud	iy and prac	ctice of	physioth	erapy.
COI		undora	tand t	Course ha laval	Outcon	nes: Aft	er the su	iccessful	course	comple	tion, lear	ners will	develop f	ollowing	attributes:			
	$\frac{10}{2}$	o unders	tand t	he musc	les, bon	linzation les and i	oints of	the vari	ous reg	ions & i	ts applica	practice of the tion in p	ractice of	physiothe	ranv.			
CO3	To	o unders	tand t	he level	of orga	nization	of the h	uman d	fferent	system	of the bo	dy & its	applicatio	n in practi	ce of physi	othera	py.	
CO4	I To	o unders	tand t	he topog	graphica	d and fu	nctional	anatom	y of the	e upper l	imb & its	s applicat	tion in pra	ctice of pl	nysiotherap	y.	••	
COS	5 To	o unders	tand t	he topog	graphica	and fu	nctional	anatom	y of the	e lower l	imbs and	l its appli	cation in j	practice of	physiother	rapy.		
Unit No.	Title of	the Uni	t						Co	ntent of	Unit						Contact Hrs.	Mapped CO
			1. I	ntroducti	ion and s	subdivisi	ions of A	natomy.										
	GENI	ERAL	2. A	Anatomic	al nome	enclature	: Terms	of Planes	, Positi	ons, Bod	y parts ar	nd movem	ents.				0	001
1	ANAT	ГОМҮ	3. E	Sasic tiss	and ann	ne body:	Definition of skin	on, locati	on and	their fun	ction.						8	COI
			5.5	Superficiz	anu app al & dee	n fascia:	Definiti	on and fi	inctions	s modifi	cations of	deen fas	cia					
			1. E	1. Define skeleton, classification of skeleton.														
	OSTEC	DLOGY	2. E	. Bone: properties, function, types, structure, blood supply, ossification. Applied anatomy of bone.														
2		& THRO	3.0	. Cartilage: types, characteristic and function. Applied anatomy of cartilage.												8	CO2	
	LO	)GY	4. <i>F</i>	Arthrology: Joint, structure, function and classification.														
			5. E	5. Basic feature and classification of synovial joint. Applied anatomy of joint.														
	1. Myology: Classification of muscles and its characteristics features. Properties and structure of skeletal muscle. 2. Classification of skeletal muscle according to shape and fascicular architecture, action of muscles																	
	SYST	TEMIC	2. C	Fascia str	ucture a	nd funct	ion Appl	ied anato	omy of i	e anu ia: nuscle a	nd fascia	cintecture		muscles.				
3	ANAT	ГОМҮ	4.0	CVS: Arteries, Capillaries, Veins, Heart, Lymphatic system.												8	CO3	
	(Brief o	outline)	5. F	5. Respiratory system: Anatomy of upper and lower respiratory tract including lungs, pleura, nose larynx, trachea.											ı.			
			6. N	6. Neurology: Anatomical and functional division of nervous system.														
			1.0	Outline th	ne anator	mical fea	atures, at	tachmen	ts, ossif	ication a	nd side de	eterminati	on of the b	oones of up	oper limb.			
			2. N	Muscles of	of Scapu	ılar regio	on and ba	ack their	origin,	insertion	action a	nd nerve s	supply. De	tails of De	ltoid, Trape	ezius		
	CLIDE		and	latissim	us dorsi. d Muscal	ac of fro	nt and h	al of un		fore or	m and has	di origin	incontion		nly and acti	<b></b>		
4	EXTRI	EMITY	5. F	oints of s	umerior	extremi	tv: Shoul	der girdl	e Shou	lder join	t Elbow	Wrist and	insertion,	hand	ply and acti	011.	8	CO4
	Latin		5. N	verves an	nd blood	vessels	of Super	ior Extre	mity an	d their p	osition co	ourse, rela	tions &dis	tribution.				
			6. E	Boundarie	es and co	ontents o	of axilla a	and cubi	al fossa	, details	of Brachi	al plexus.						
			7. A	Applied a	natomy	of all st	ructures	of Superi	or Extre	emity.								
			1. C	Outline th	e anator	nical fea	tures, at	tachment	s, ossifi	cation a	nd side de	eterminati	on of the b	ones of up	per limb.			
			2. F	ascia and	d Muscle	es of from	nt, back a	and medi	al thigh	: origin,	insertion,	nerve su	pply and a	ction.				
5	INFE	ERIOR	3. F	ascia and	1 Muscle	es of Glu	iteal regi	on: origi	n, inser	tion, ner	ve supply	and actio	n. n incortion		nnly and ac	tion	0	COF
5	EXTRI	EMITY	4. F	ascia and	1 Muscle	es of sol	es of foo	t origin	insertic	n nerve	supply a	id action	II, IIISCITIOI	i, nei ve su	ppry and ac	uon.	8	COS
			6. Jo	oints of i	nferior e	extremity	y: Hip gi	rdle, Hip	joint, k	Knee, An	kle and jo	oints of fo	ots.					
			7. A	arches of	foot and	d its sign	ificance.	Applied	anaton	ny of all	structures	of inferio	or Extremi	ty.				
Refe	rence Bo	ooks:				_												
1	B.D. Chi	aurasia's	s, Hun Forth -	nan Anat	tomy-Ve	olume 1,	2, 3 CB	S Publish	$\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{1}$	Distribute	ors.							
3	Snell-Cl	linical A	natom	y by reg	ions -Li	ppincott	oui Atia	s- v UI. 1,	2, 5 Jay	pee bro	11018.							
4	McMinn	n's Last'	s Anat	tomy-Re	gional a	nd appli	ed, Chur	chill Liv	ingstone	e.								
5	Cunning	gham Ma	inual o	of Practic	al Anat	omy Vo	I. I, II, II	I, Churcl	ill Livi	ngstone.								
6	Williams Basic Ar	s & War	wick,	Gray's A	Anatomy	y-Church	ill Livin cDowell	gstone.										
e-I	Learning	g Source	:	SIGIO <sub>B</sub> (	by billot	at und ivi	ebowen											
1. <u>h</u>	ttps://yo	utu.be/X	SRUE	XZZBH	[4													
2. <u>h</u>	ttps://yo	utu.be/0	60 XI	NKwuOI	3													
<u> </u>	ttps://yo	utu.be/4	Sab-2	E4ZDI														
	Dac						Course	Articula	ation Ma	atrix: (M	lapping of	f COs wit	h POs and	PSOs)	,			
PO-	PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	01	1	3	1	2	-	-	-	1	2	1	-	2	2	1	2	-	3
C	02	2	3	2	2	-	-	-	1	3	1	-	3	2	2	1	-	2
	D3	1	3	1	2	-	-	-	1	2	-	-	2	2	1	2	-	3
C	05	1	3	1	2	-	-	-	1	2	1	-	2	2	1	2	-	3
						1- I	Low Co	relation	n; 2- M	oderate	Correla	tion; 3-	Substanti	al Correl	ation			
									At	tributes	& SDGs							

Course Code	Course Title		Attributes										
		Employability	Entropropourship	Skill	Gender	Environment &	Human	Professional	No.				
PT101	HUMAN ANATOMY-I	Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics					
									3,4				



Effective	Affective from Session: 2022-23												
Course (	Code	PT102	Title of the Course	HUMAN PHYSIOLOGY-I	L	Т	Р	С					
Year		Ι	Semester	Ι	3	1	0	4					
Pre-Req	Pre-Requisite         Nil         Co-requisite         Nil												
Course (	Objectives	The student will be	able to demonstrate knowl	ledge in human physiology as needed for the study and pr	actice	of phys	iothera	py.					
	Course Outcomes												
CO1	1 To understand about general physiology & its application in practice of physiotherapy.												
~ ~ ~													

CO2	To understand the nerve, muscle physiology its application in practice of physiotherapy.
CO3	To understand about basics of hematology & its application in practice of physiotherapy.
CO4	To understand about respiratory system & its application in practice of physiotherapy.
CO5	To understand about cardiovascular system and its application in practice of physiotherapy.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	GENERAL PHYSIOLOGY	<ol> <li>The cell &amp; cell organelles – structure &amp; functions.</li> <li>Homeostasis, biofeedback mechanisms.</li> <li>Transport across cell membrane.</li> <li>Outline of membrane potential &amp; action potential.</li> </ol>	8	CO1
2	NERVE PHYSIOLOGY& MUSCLES PHYSIOLOGY	<ol> <li>Structure properties and classification of nerve and types of nerve fiber.</li> <li>Resting Membrane Potential Action potential, Propagation of nerve impulse, Degeneration and regeneration of nerve.</li> <li>Muscle –classification, structure, sarcomere &amp; properties of muscles, Myoneural junction &amp; transmission.</li> <li>Molecular basis of muscle contraction Motor unit, EMG.</li> <li>5. Difference between smooth, skeletal and cardiac, Applied physiology – Myasthenia gravis, Rigor mortis, Reaction of degeneration, Muscle disorders.</li> </ol>	8	CO2
3	HAEMATO LOGY	<ol> <li>Composition and functions of blood.</li> <li>Red blood cell – morphology, formation, normal count, functions, physiological and pathological Variation.</li> <li>White blood cell – morphology, classification, properties, functions, physiological &amp; pathological variation.</li> <li>Hemoglobin – basic chemistry, fate and functions, Immunity – definition, classification, concept of antigen &amp; antibody.</li> <li>Homeostasis – steps, role of platelets, Blood groups – A,B,O, AB and Rh system, Anemias, ESR &amp; PCV.</li> <li>Plasma proteins, Anticoagulants, Blood transfusion, Applied aspects of hematology.</li> </ol>	8	CO3
4	RESPIRATION	<ol> <li>General organization of respiratory system, Mechanics of respiration – Inspiratory and expiratory.</li> <li>Muscles, intra-pleural pressure, lung &amp; thoracic, Compliance, surfactant, lung volumes &amp; capacities.</li> <li>Diffusion of gases, Transport of respiratory gases, Regulation of respiration, Outline of hypoxia (types &amp; physiological changes).</li> <li>Acclimatization to high altitude, Dead space, Ventilation/ perfusion ratio.</li> <li>Maximum breathing capacity &amp; breathing reserve, pulmonary function tests, Artificial respiration.</li> <li>Asphyxia, cyanosis (types and physiological changes).</li> </ol>	8	CO4
5	CARDIOVASCULAR SYSTEM & EXERCISE PHYSIOLOGY	<ol> <li>General organization and properties of cardiac muscle, Origin and conduction of cardiac impulse, cardiac cycle and heart sounds.</li> <li>Normal heart rate, bradycardia, tachycardia, Normal ECG, Cardiac output- normal values, physiological variations, Factors affecting cardiac out- put and regulation.</li> <li>Blood pressure – normal values, measurement, determinants, short term and long term regulation</li> <li>Regional circulation- Coronary, muscular, cerebral, Functions of Lymph, Pressure and volume changes during cardiac cycle.</li> <li><b>5.</b> Patho-physiology of circulatory shock and edema, Effects of exercise training, Hyper/Hypotension, Hemodynamic.</li> </ol>	8	CO5
Refe	erence Books:			
1.	Concise Medical Physiol	by by Chaudhuri, 4th Edition; New Central Book Agency.		
2.	A Textbook of Practical I	Dunngam; 4th ed, Jaypee Brothers. Physiology Ghai C L. Jaypee Brothers		
4.	Practical physiology by V	(jaya Joshi, Vora Medical Publication.		
5.	Human Physiology, Chat	terjee. Vol: 1&2; 10th Edition; Medical & Allied Agency		
6.	Textbook of Medical Ph	ysiology by Guyton & Hall, 11th Edition; Elsevier Publication		
7.	Principles of Anatomy &	& Physiology, Tortora, 8th Edition; Harper & Row Publication		
8.	Textbook of Physiology	: Ganong		
e-1	https://wowtu_ba/lubDr0	۵.۵.«۶		
2	https://youtu.be/JuiiDX9	Usriho		
3.	https://youtu.be/h1aSFZ	9aw94		
4.	https://youtu.be/uYm41	alVV0		_

5. https://youtu.be/VWamhZ8vTL4

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO	DO1	DO3	DO3	DO4	DO5	DOG	DO7	DOS	DOO	<b>DO10</b>	DO11	PO12	DSO1	DSO2	DSO2	DSO4	DSO5	DSOG
CO	FUI	FO2	103	F04	105	F00	F07	100	F09	FOID	FOIL	F012	1301	F302	1303	F304	1303	1300
CO1	1	3	1	2	-	-	-	1	2	-	-	2	2	1	-	1	-	1
CO2	1	3	1	3	-	-	-	1	3	-	-	3	3	2	-	2	-	1
CO3	1	3	1	2	-	-	-	1	2	-	-	2	3	1	-	1	-	1
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	-	1
CO5	1	3	1	2	-	-	-	1	2	-	-	2	2	1	-	1	-	1

Course Code	Course Title		Attributes SI										
DT102	HUMAN DUVELOLOCY I	Employability	Entrepreneurship	Skill	Gender	Environment & Sustainability	Human	Professional	No.				
P1102	HUMAN PH I SIOLOG I -I	1	1	√	√	Sustainability	value √	t	3,4				



Effective from Session: 2022-23													
Course Code	PT103	Title of the Course	BIOCHEMISTRY	L	Т	Р	С						
Year	Ι	Semester	Ι	3	1	0	4						
Pre-Requisite	Nil	Co-requisite	Nil										
<b>Course Objectives</b>	The student w	The student will be able to demonstrate knowledge in clinical as needed for the study and practice of physiotherapy.											

	<b>Course Outcomes:</b> After the successful course completion, learners will develop following attributes:
CO1	To understand about carbohydrate & its application in therapeutic exercises and rehabilitation of sport injury.
CO2	To understand about protein & its application in practice of physiotherapy during rehab of various disease, trauma and fitness training.
CO3	To understand about lipid and nuclic acid& its application in practice of physiotherapyduring rehab of various disease, trauma and fitness
	training.
CO4	To understand about vitamin and enzyme and hormones & its application in practice of physiotherapy during rehab of various disease, trauma
	and fitness training.
CO5	To understand about Nutrition and its application in practice of physiotherapy during rehab of various disease, trauma and fitness training.

Unit Title of the Contact Mapped **Content of Unit** No. Unit Hrs. CO 1. Chemistry, Definition, Classification with Examples and Functions of Glycolysis. CARBO 2. Chemistry, Definition, Classification with Examples and Functions of TCA cycle. 8 1 CO1 HYDRATE 3. Glycogen metabolism, Glycogen storage disorder, Diabetes Mellitus and glycosuria. 4. Hormonal regulation of blood glucose, HbA1C and GTT. 1. Chemistry-definition-function-classification of Amino acids-protein structure 2. Effect of temperature on proteins- denaturation-coagulation; isoelectric pH & its importance

2	PROTEIN	3. Metabolism-Digestion and absorption Decarboxylation- De-amination	8	CO2
		4. Trans methylation transamination & their importance-Detoxification of ammonia including urea cycle		
		5. Clinical biochemistry: Relevance of blood levels of, urea, & uric acid, Protein in urine.		
		1. Chemistry-definition-classification-[including fatty acids with examples]-function		
		2. Metabolism-Digestion and absorption of lipids— $\beta$ oxidation of saturated fatty acids and its		
	LIPIDS	energetics and regulation of fat metabolism in adipose tissue Ketone bodies formation &		
2	AND	utilization—cholesterol and its importance[no biosynthesis needed]- classification, sources &	0	$CO^{2}$
3	NUCLIC	function of lipoproteins lipoproteinemia atherosclerosis	8	005
	ACID	3. Clinical Biochemistry - Lipid profile-Tri - glyceride, cholesterol/HDL/LDL/VLDL etc, Liver		
		function test & Renal function test.		
		4. DNA/RNA definition-structure and function types-Genetic code-catabolism of purine –gout.		
	VITAMINS	1. Definition, classification, functions dietary sources, daily requirement & Deficiency disorders.		
	&	2. Definition, Classification of enzymes, properties, mechanism of action, Clinical importance &		
4	ENZYMES	regulation of activity	8	CO4
	&	3. Introduction Definition & Classification of hormones.		
	HORMONES	4. Mechanism of hormone action, Effects of hormones on various metabolism & hormonal disorders.		
	NUTRITION	1. Introduction of Nutrition, Nutrients of their role in human		
5	& SDECIAL	2. Nutritional requirements, Balance diet, Nutritional disorder, SDA (special dynamic action)	Q	CO5
5	TOPICS	3. Respiratory quotient (RQ) & Basal Metabolism rate (BMR)	0	COS
	101105	4. Water electrolyte balance & acid base balance.		
Refere	ence Books:			
1. Fu	ndamentals of Bio	chemistry-by Dr. Deb Jyoti Das,		
2. Es	sentials of Bio-che	emistry by U. Satyanarayan, 1st Edition, Books and Allied Publications.		
3. Te	xtbook of Biocher	nistry – Chatterje and Shinde		
4. Te	ext book of Medic	al Bio-Chemistry – Dr. M.N.Chettergee, 5th Edition, Jaypee Publication.		
5. Fu	indamental of Bio	-Chemistry –.Dr. A. C. Deb, 5th Edition, Central Publication.		
6. Bi	o-Chemistry intro	duction – Mekee, 2nd Edition, McGraw-Hill Publication.		
e-Le	arning Source:			
1. <u>http</u>	s://youtu.be/t5Dv	rF50Vr1Y		

2. https://youtu.be/gggC9vctvBQ

3. <u>https://youtu.be/ufvZ8bYtyO8</u>

4. https://youtu.be/Q6R4o-oECxs

	Course Articulation Matrix: (Mapping of COs with POs and PSOs)																
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	2	2	-	-	-	1	2	1	-	2	2	1	-	1	-
CO2	1	3	1	3	-	-	-	2	3	-	-	3	3	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	2	-	2	3	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	1	-	2	2	1	-	1	-

Course Code	Course Title		Attributes SI										
PT103	BIOCHEMISTRY	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.				
		1	4	, √	1	-	√	√	3,4				



Effective from Session: 2015-16												
Course Code	PT104	Title of the Course	BASICS OF ELECTROTHERAPY	L	Т	Р	С					
Year	Ι	Semester	Ι	3	1	0	4					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	The student will b	be able to demonstrate k	nowledge in basic of electrotherapy as needed for the	e study	y and j	practice	e of					
Course Objectives	physiotherapy.											

	Course Outcomes											
CO1	To understand basic principles of physics, Laws of Electricity, Electro-magnetic spectrum & its application in practice of physiotherapy.											
CO2	To understand basic principles of electric current& its application in practice of physiotherapy.											
CO3	To understand basic of electrical supply & its application in practice of physiotherapy.											
CO4	To understand basic of various agents & its application in practice of physiotherapy.											
CO5	To understand circuit diagrams and basic knowledge of equipment's & its application in practice of physiotherapy.											

Unit No.	Title	of tl	1e Unit	;						Conter	nt of Uni	t				C	Contact Hrs.	Mapped CO
1	PH PRI	IYSI NCI	CAL PLES	1 2 3 4 5	<ul> <li>Struct viscos</li> <li>Struct electri</li> <li>Condu</li> <li>Ohm's Semic</li> <li>Capac analog</li> </ul>	ure and ity, den ure of a city. actors, li s Law – onducto itance c gue and	propert sity and tom, mo nsulator Its app ors, Trai ondenso digital.	ies of m l elastic blecules rs, Poten lication nsistors, ers and	natter—s ity. , eleme ntial dif to AC , Ampli in DC a	olids, lic nts and o ference, & DC cu fiers, Tr and AC o	uids and compound Resistan urrents. R ansducer circuits. I	gasses, a ds, Elect ce and ir ectifying and Osc Display d	adhesion, ron thera ttensity. g Devices illator cir levices ar	surface t py static a Thermic cuits. nd indicat	ension, and curren nic Valve ors–	nt es,	8	COI
2	EFF CU ELE	FECT URRI CTR	TS OF ENT ICITY	1 2 3 4	. Chem action . Magne Induct . Mili A . Electr	ical effe s. etic effe ion. Ammeter comagne	cts- ion cts, Mo r and vo etic spec	s and el lecular ltmeter ctrum.	theory of transfo	tes, ioniz of magne ormers ar	zation, Pr etism, Ma nd choke	oductior agnetic f coil.	i of an El	MF by cho	emical etic		8	CO2
3	ELE S	CTR UPP	RICAL LY		1. Brief 2. Dange 3. Preca 4. First a	outline ers- sho ution – s uid and i	of main t circui safety d nitial m	supply t, electr evices, nanagen	of elect ic shock earthing nent of	tric curre ks. g fuses e electric s	ent. tc. shock.						8	CO3
4	VARIC	OUS A	AGENT	Г <b>S</b>	<ol> <li>Electr</li> <li>Thern</li> <li>Cryoth</li> <li>Electr</li> <li>Electr</li> <li>Electr</li> </ol>		8	CO4										
5	CIRCUI AN KNOV EQU	T DI ID B. VLEI JIPM	AGRA ASIC DGE O IENTS	MS 1 F 3	1. Shorty 2. Ultras 3. Micro 4. "Ligh	wave Di ound (U wave D t Ampli	atherm JS) iatherm fication	y (SWE 1y (MW by Stir	)) D) nulated	Emissio	n of Rad	iation" (1	LASER)				8	CO5
Refere	nce Book	s:																
1. Clay	ton's Elect	rothe	rapy (th	neory ar	nd practi	$\frac{ce) - Cl}{D}$	ayton's	AIBS p	ublicatio	ons.								
2. Elect	rotherapy	Expla	ained by	y John I	Low and	Keed, 3	rd editio	on, B &	H Publi	cations.								
3. Pract	trotherapy	· Evi	dence I	by Josep Based I	n Kann	by Kite	hen She	sild 11t	h ed									
5. Phys	ical Agent	ts in	Rehabi	litation	: From	Researc	h to Pra	ctice by	v Came	ron.								
e-Lea	arning So	urce	:						Carro									
1. <u>http</u>	os://youtu.	be/P	RQuR	zp7SE														
2. <u>http</u>	os://youtu.	be/G	7Uccfw	vRvwY														
3. <u>http</u>	os://youtu.	be/dl	NnTubs	<u>gY2gs</u>														
4. <u>htt</u>	os://youtu.	be/'/(	<u>JkyTU</u>	<u>TUZelpw</u>														
						Co	urse A	rticula	tion Ma	atrix: (N	lapping	of COs	with POs	s and PS	Os)			
PO-F	PSO P	01	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	)1	1	3	2	2	-			1	2			2	3	1	2	3	_
	$\frac{1}{2}$	1	3	1	3	-	-	-	2	3	-	-	3	3	-	1	2	-
CO	)3	1	3	1	2	-	-	-	1	2	-	-	2	2	2	1	2	2
CO	)4	1	3	1	2	-	-	-	1	3	1	-	3	2	3	1	3	2
CO	)5	1	3	1	2	-	-	-	1	2	2	-	2	3	1	2	2	2

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

Course Code	Course Title		Attributes												
DT104	BASICS OF	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	No.						
P1104	ELECTROTHED ADV	1.1.1		Development	Equanty	Sustainability	value	Etnics							
	ELECTROTHERAP I	1	√	√	1		1	*	3,4						



Effective from Sessi	on: 2015-16						
Course Code	CS107	Title of the Course	COMPUTER APPLICATION IN PHYSIOTHERAPY	L	Т	Р	С
Year	Ι	Semester	Ι	2	1	0	3
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The main obie	ctive of the course is to p	rovide fundamental knowledge of computers, windows, MS word, ar	nd Pow	ver no	oint	

	Course Outcomes
CO1	After studying this course the students will know – The fundamentals of computers and computer systems.
CO2	After studying this course the students will know –Understanding the basic concepts of DOS commands.
CO3	After studying this course the students will know -A Basic understanding of the windows.
CO4	After studying this course the students will know –Understanding MS Word.
CO5	After studying this course the students will know -Knowledge, understanding, and basic concepts of presentation software.

Unit No.	Titl	le of th	ne Unit							Conter	nt of Uni	t				C	ontact Hrs.	Mapped CO
	C	OMDI	TED	,	What is	a comp	uter? C	ompon	ents of	a compu	ter syster	n. Classi	fication of	of comput	ers. Types			
1	FUN	DAME	ENTAL	s (	of comp	outers. A	A brief h	nistory o	of the e	volution	of comp	uters and	generati	on of con	puters.		6	CO1
	1010			с С	Comput	er hard	ware an	d softw	are. Inp	out/ Outp	out device	es.						
2		DO	8	]	Elemen	tary kno	wledge	of DO	S comn	nands D	R, CLS,	DATE, '	ГІМЕ, М	D, CD, R	D,		5	$CO^2$
2		DO	5	]	RENAN	A,DEL,	BACK	UP, RE	STOR	E, COPY	, SCANI	DISK, C	HKDSK.				5	002
				]	Differei	nce betw	veen wi	ndows	and DO	S. Basic	Features	s - Date,	Time, Ti	me Zone,	Display,			
3	w		ws	:	Screen S	Saver, F	Fonts, M	louse, a	ind mou	ise point	ers. Usin	g access	ories sucl	n as a calc	ulator,		6	CO3
5	•		J 11 G	1	paintbru	ısh, CD	player,	etc. Us	se of Wi	indows I	Explorer	for movi	ng and co	pying fil	es.		0	005
				]	Introduc	ction to	MS Of	fice and	l its inte	grated n	ature.							
				:	Starting	Word,												
				j	ustifyir	ng text.												
4	Ν	AS-WO	ORD		combini	ing cells		6	CO4									
				t	footers.	Print pr												
				:	source.	urce. Adding and removing fields from the data source.												
				,	The bas	The basic concept of presentation software. Standard, Formatting, and drawing toolbars in												
	PO	WERI	POINT	1	PowerP	oint and	l their u	se. Cre	ating ar	d openin	ng a prese	entation.	Creating	, deleting	, opening,			
5	(PRE	ESENT	TATIO	N a	and cop	ying sli	des. Clo	osing ar	nd savin	ig a pres	entation.	Use of s	lide sorte	r, adding			6	CO5
	SC	OFTW	ARE)	1	neader/1	footer. U	Jse of n	naster s	lides an	d color l	oox. Use	of anima	tion feat	ures. Inse	rting			
				1	oictures	, resizir	ig pictu	res. Ins	erting o	rganizat	ion chart	. Use of a	auto cont	ent wizar	d.			
Refere	nce Boo	ks:			-					-						<u>b</u>		
1. A	First Co	ourse i	n Comp	outers: S	Saxena,	Vikas F	ublishi	ng Hou	se									
2. Fu	indament	tals of	Compu	ter scie	nce - M	I. Afsha	r Alam											
3. Fu	indament	tal of I	nforma	tion Te	chnolog	gy by D	S. Yad	lav- Ne	w age I	nternatio	onal							
e-Lea	arning S	ource	: (F F0															
$1. \frac{htt}{htt}$	tps://you	tu be/I	VIE F9	yypzsw														
$\frac{2}{3}$ htt	tps://you	tu be/	ZURYI	$\frac{  D ^{-E}}{ b  }$														
4. htt	tps://you	tu be/e	Eo aa	2001 0 20wCw														
			20 44	priori	Course Articulation Matrix: (Manning of COs with POs and PSOs)													
	80					Co	urse A	rticula	tion IVIa	atrix: (IV	Tapping	of COs	with POs	and PSC	JS)			
C(	)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO	)1	1	2	2	2	-	-	-	1	2	1	-	2	-	2	2	1	-
CO	2	1	-	1	3 2 3 3 - 1											1	1	-
CO	3	1	3	1	2	-	-	-	1	2	2	-	2	-	1	1	1	-

COI	1	2	2	2	-	-	-	1	2	1	-	2	-	2	2	1	
CO2	1	-	1	3	-	-	-	2	3	-	-	3	-	1	1	1	
CO3	1	3	1	2	-	-	-	1	2	2	-	2	-	1	1	1	
CO4	1	2	1	2	-	-	-	1	3	-	-	3	-	1	2	1	
CO5	1	2	1	2	-	-	-	1	2	1	-	2	-	1	1	1	
					1- Lo	w Corr	elation	; 2- Mo	oderate	Correlat	ion; 3- S	ubstanti	al Corre	lation			

Attributes & SDGs

Course Title		Attributes											
COMPUTER	Employability	Entropyon overship	Skill	Gender	Environment &	Human	Professional	No.					
APPLICATION IN	Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics						
PHYSIOTHERAPY			1					3,4, 11					
	Course Title COMPUTER APPLICATION IN PHYSIOTHERAPY	Course TitleCOMPUTER APPLICATION INPHYSIOTHERAPY	Course TitleCOMPUTERAPPLICATION INPHYSIOTHERAPY	Course TitleAttCOMPUTER APPLICATION INEmployabilityEntrepreneurshipSkill DevelopmentPHYSIOTHERAPYImage: Constraint of the second	Course TitleAttributesCOMPUTER APPLICATION INEmployabilityEntrepreneurshipSkill DevelopmentGender EqualityPHYSIOTHERAPYImage: Constraint of the second	Course TitleAttributesCOMPUTER APPLICATION INEmployabilityEntrepreneurshipSkill DevelopmentGender EqualityEnvironment & SustainabilityPHYSIOTHERAPYImage: Colspan="3">Image: Course of the section of the sectio	Course TitleAttributesCOMPUTER APPLICATION INEmployabilityEntrepreneurshipSkillGender DevelopmentEnvironment & SustainabilityHuman ValuePHYSIOTHERAPYImage: Colspan="3">Image: Course of the second seco	Course TitleAttributesCOMPUTER APPLICATION INEmployabilityEntrepreneurshipSkillGender DevelopmentEnvironment & EqualityHuman ValueProfessional EthicsPHYSIOTHERAPYImage: Colspan="4">Image: Course of the second					



Effective from Session: 2015-16												
Course Code	LN101	Title of the Course	BASICS OF PROFESSIONAL COMMUNICATION	L	Т	Р	С					
Year	Ι	Semester	I	2	1	0	3					
Pre-Requisite	Nil	Co-requisite	Nil									
<b>Course Objectives</b>	The major	objective of the course	is to develop professional communication skills among the	stude	ents.							

	Course Outcomes										
CO1	After studying this course the students will know - The meaning & importance of professional communication as well as effective professional										
	communication.										
CO2	After studying this course the students will know –Understanding the language through literature like essays and short stories.										
CO3	After studying this course the students will know –Basic concepts and knowledge of vocabulary.										
CO4	After studying this course the students will know –Understanding and practice of basic grammar.										
CO5	After studying this course the students will know -Knowledge, understanding, and skills in report writing & business letter writing.										

Unit No.	Title of	the Unit	ţ	Content of Unit													Mapped CO
	PROFES	SIONA		a.	Profe	ssional	Comm	nunicat	ion: Me	eaning &	k impor	tance					
1	COMMUN	NICATIO	DN	b.	Essen	tials of	f Effec	tive Co	mmuni	cation						6	CO1
				c.	Barrie	ers to E	Effectiv	ve Com	munica	tion							
				a.	Essay	's:											
		ULACE			"The	Effect	of the	Scienti	fic Tem	per on l	Man" by	Bertrar	nd Russe	11			
2	LANC THR	DUGH			"The	Aims o	of Scie	nce and	d Huma	nities" ł	ру Моос	ly E. Pri	or			5	CO2
_	LITER	ATURE		b.	Short	Storie	s:									-	
					"The	Meetir	ig Pool	" by R	uskin B	ond							
					"The	Portrai	t of a l	Lady" t	by Khus	hwant S	Singh						
	BA	SIC		a.	Euph	emism,	, One-v	word S	ubstituti	ion, Syn	onyms,	Antony	ms			<i>.</i>	<b>G</b> 02
3	VOCAE	ULARY		<ul> <li>b. Homophones, Idioms and Phrases, Common mistakes</li> <li>c. Confusable words and expressions</li> </ul>													CO3
			c. Confusable words and expressions														
4			D	a. Articles, Prepositions, Tenses b. Concord (Subject Varb agreement), Varbe: kinds & uses													CO4
4	BASIC GI	KAMINIA	MAR b. Concord (Subject-Verb agreement), Verbs: kinds & uses													0	C04
			c. Degrees of Comparison a Report writing: What is a report? Kinds and objectives of reports, writin														
		a. Report writing: what is a report? Kinds and objectives of reports, writin															
5	BASIC CON	MPOSIT	ION	b.	Busin	ess Le	tter W	riting:	Introdu	ction to	busine	ss letter	s. types	of busin	less	6	CO5
					letter	s. Lavo	ut of b	usines	s letters	Letter	of Enau	irv / Co	mplaint				
Refere	nce Books:					/ /				, 	1	5	1				
1. Lata,	Pushp& Ku	mar, San	jay. Co	ommunic	ation S	kills, O	xford U	niversit	y Press-	2012							
2. Quin	tanilla, Kelly	<u>M. &amp; V</u> Juiumda	/ahl, S	hawn T.	Busine:	ss and F	rofessi	onal Co	mmunic	ation, Sa Aethods	ge Public Orient B	cations Ir	<u>idia Pvt. I</u> 2010	_td-2011			
4. Aror	a. V. N. &	Chandra	. Laks	hmi. Im	prove Y	Your W	riting:	From (	Compreh	ensive t	o Effecti	ve Writi	ng. Oxfo	rd Unive	rsitv Pı	ress-2010	(For the
prese	ribed essays	- "The E	ffect of	f the Scie	entific T	emper	on Man	" by Be	rtrand R	ussell &	"The Ai	ms of Sci	ience and	Humanit	ies" by	Moody E.	Prior)
e-Lea	arning Sour	e:	/ <b>1</b>	··· :0	7.10	_											
1. <u>https</u> 2. https	://www.yout	cedirect	.com/te	<u>v=jQx</u>	<u>cholog</u>	<u>s</u> v/lingui	sticther	orv#:~:te	ext=Ling	uistic%2	20Theory	%20was	%20form	ed%20bv	.to%20	all%20t vn	vicallv%2
0dev	eloping%20h	umans															
3. <u>https</u>	://linguistics.	ucla.edu	/under	graduate	what-is	s-linguis	stics/										
4. <u>nttps</u>	://www.thou	gntco.co	m/noai	n-cnoms	<u>KY-476</u>	9113											
PO E	80				Co	ourse A	rticula	tion Ma	atrix: (N	lapping	of COs v	with POs	s and PSC	Os)			
- 10-1 C(	PO1	PO2	PO3	3 PO4 PO5 PO6 PO7 PO8 PO9 PO10 PO11 PO12 PSO1 PSO2 PSO3 PSO4 PS													PSO5
CO	- 1	-	-	- <u>- 2 - 2 - 2 2</u>												-	-
CO	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
	4 -	-	-	-	-	2	- 2	-	-	-	-	2	-	-	-	-	-
CO		-	-	-	-	2	1	1	-	-	1	2	-	-	-	1	1

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

Course Code	Course Title		Attributes									
LN101	BASICS OF	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	No.			
	PROFESSIONAL	Emproyuoning	Lindepreneuromp	Development	Equality	Sustainability	Value	Ethics				
	COMMUNICATION			4					3,4, 11			



Effective from Session: 2	2022-23									
Course Code	PT105	Title of the Course	HUMAN ANATOMY-I LAB	L	Т	Р	С			
Year	Ι	Semester	Ι	0	0	2	1			
Pre-Requisite	Nil	Co-requisite	Nil							
Course Objectives	The student will	udent will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapy.								

		Course Outcomes											
CO1	To identify anato	mical aspect of the level of organization of the human body practically & its application in practice of physical	ysiotherapy	·.									
CO2	To identify anato	omical and functional aspect of muscles, bones and joints of the various regions practically& its appli	cation in p	ractice of									
	physiotherapy.												
CO3	To identify and p	ractically apply various terms related to human different system of the body & its application in practice	of physioth	erapy.									
CO4	To identify ana	tomical and functional aspect of neuromusculoskeletal structure of superior extremity& its applic	ation in pi	actice of									
	physiotherapy.												
CO5	no identity anatomical and functional aspect of neuromusculoskeletal structure of interior extremity & its application in practice of												
	physiotherapy.												
Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO									
		1. Practical demonstration of human body on model with using different anatomical terms.											
1	GENERAL	2. Demonstration of Anatomical position and movement of joint with anatomical terms.	4	CO1									
-	ANATOMY	3. Practical demonstration of various type of tissue and there location on human body.		001									
		4. Practical demonstration of skin and fascia.											
		1. Practical demonstration and classification of axial and appendicular skeleton on model.											
		Identification and orientation of bones and joints in an articulated skeleton.											
2	OSTEOLOGY & 2. Demonstration of types of bone on models.												
	AKTHKULUGY	3. Practical demonstration of various type of cartilage on models.											
		1. Demonstrate different terms related to skaletal muscles on human body.											
	SYSTEMIC	2 Demonstrate different shape of skeletal muscle and action of different group of muscle on human											
3	ANATOMY	body.	4	CO3									
		3. Demonstrate location of fascia and fascial line on human body.											
		1. Practical demonstration and identification, side determination, parts, and different bony. land											
		marks and its attachment on non-articular bones of superior extremity.											
	OVOTEMIC	2. Visual estimation and palpation of different vascular and Neuromusculoskeletal structure of											
4	ANATOMY	superior extremity on human body.	4	CO4									
	ANATONT	3. Practical demonstration of action of different muscle of superior extremity.											
		4. Visual estimation and palpation of the joint line and structure around the joints.											
		5. Demonstration of Radio imaging anatomy of superior extremity.											
		1. Practical demonstration and identification, side determination, parts, and different bony. land											
		marks and its attachment on non-articular bones of inferior extremity.											
_	INFERIOR	2. Visual estimation and palpation of different vascular and neuro musculoskeletal structure. of											
5	EXTREMITY	inferior extremity on human body.	4	CO5									
		3. Practical demonstration of action of different muscle of interfor extremity.											
		4. Visual estimation and papation of the joint fine and structure around the interior extremity joints.											
Refere	nce Books:	5. Demonstration of Radio imaging anatomy of interior extremity.											
1 B.	D. Chaurasia's, Huma	an Anatomy-Volume 1, 2, 3 CBS Publishers & Distributors.											
2 Inc	lerbir Singh, Textboo	k of Anatomy with Colour Atlas-Vol. 1, 2, 3 Jaypee Brothers.											
3 Sn	ell-Clinical Anatomy	by regions - Lippincott.											
4 M	Minn's Last's Anato	my-Regional and applied, Churchill Livingstone.											
5 Cu	nningham Manual of	Practical Anatomy Vol. I, II, III, Churchill Livingstone.											
6 W	illiams & Warwick, O	Gray's Anatomy-Churchill Livingstone.											
7 Ex	tremities by Quining	Wasb											
8 Ba	sic Anatomy & Phys	iology by Smout and McDowell											
e-Lea	rning Source:												
4. <u>ht</u>	4. <u>nttps://youtu.be/X5KUFXZZBH4</u>												
<u>5. ht</u>	tps://youtu.be/060_X												
U. III	1D5.// VOULU.DE/45aD-2												

6. https://youtu.be/4Sab-2E4ZDI

						Course	e Articu	lation I	Aatrix: (	Mapping	g of COs	with POs	and PSO	s)			
PO-PSO	PO1	PO2	PO3		PO5	PO6	PO7	POS	POQ	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO/	PSOS
СО	101	102	105	104	105	100	10/	100	109	1010	1011	1012	1501	1502	1305	1304	1505
CO1	1	3	1	2	-	-	-	1	2	1	-	2	-	1	2	-	3
CO2	2	3	2	2	-	-	-	1	3	1	-	3	-	2	1	-	2
CO3	1	3	1	2	-	-	-	1	2	-	-	2	-	1	2	-	3
CO4	2	3	1	2	-	-	-	1	3	-	-	3	-	2	3	-	3
CO5	1	3	1	2	-	-	1	1	2	1	-	2	-	1	2	-	3

<b>Course Code</b>	Course Title		Attributes										
PT105	HUMAN ANATOMY-I	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.				
	LAB	1	1	1	4		1	4	3,4				



Effective from Sessio	Effective from Session: 2022-23												
Course Code	PT106	Title of the Course	HUMAN PHYSIOLOGY-I LAB	L	Т	Р	С						
Year	Ι	Semester	Ι	0	0	2	1						
Pre-Requisite	Nil	Co-requisite	Nil										
Course Objectives	The student will be physiotherapy.	The student will be able to demonstrate the practical knowledge in human anatomy as needed for the study and practice of hysiotherapy.											

	Course Outcomes									
CO1	To understand about general physiology & its application in practice of physiotherapy.									
CO2	To understand the nerve, muscle physiology& its application in practice of physiotherapy.									
CO3	To understand about basics of hematology its application in practice of physiotherapy.									
CO4	To understand about respiratory system & its application in practice of physiotherapy.									
CO5	To understand about cardiovascular system and its application in practice of physiotherapy.									

Unit No.	Title of the Unit		Content of Unit	Contact Hrs.	Mapped CO
1	GENERAL PHYSIOLOGY	1.	Learning through chart and models	4	CO1
2	NERVE PHYSIOLOGY & MUSCLES PHYSIOLOGY	1. 2. 3. 4.	NCV Skeletal muscle-properties-pre / after Load-Fatigue-Starling's law Cardiac muscle-properties-effect of Ach &Adrenaline Ergography	4	CO2
3	BLOODS	1. 2. 3.	Hb, RBC WBC, Blood Groups BT, CT	4	CO3
4	RESPIRATION	1. 2. 3. 4.	Spirometry Lungs volume Timed vital capacity Respiratory sounds	4	CO4
5	CARDIOVASCUL AR SYSTEM & EXERCISE PHYSIOLOGY	1. 2. 3. 4.	Blood Pressure – Effects of change in posture & exercise Examination of Pulse Heart sound ECG	4	CO5
Referen	ce Books:				
1. Cor	ncise Medical Physiolog	y by	Chaudhuri, 4th Edition; New Central Book Agency.		
2. Hu	Fextbook of Practical Ph	nnga ivsiol	logy. Ghai C.L. Javnee Brothers.		
4. Pra	ctical physiology by Vi	jaya .	Joshi; Vora Medical Publication.		
5. Hu	man Physiology, Chatte	rjee.	Vol: 1&2; 10th Edition; Medical & Allied Agency		
6. Tex	tbook of Medical Physi	olog	y by Guyton & Hall, 11th Edition; Elsevier Publication		
7. San	nson Wright's Applied	Physi	ology 13th ed, Keele CA, Neil E & Joels N, Oxford Medical Pub.		
8. Pfil 9 Tex	thook of Physiology : C	lanor	nogy, Tortora, sin Edition; Harper & Kow Publication.		
e-Lean	rning Source	Janoi	-5		
1. http	os://youtu.be/X5RUFXZ	ZBF	[4		
2. http	os://youtu.be/060_XNKv	wuOl	E		
3. <u>http</u>	os://youtu.be/4Sab-2E4Z	ZDI			
4. <u>http</u>	os://youtu.be/uYm4l_alV	/V0			
5. <u>http</u>	os://youtu.be/VWamhZ8	<b>vTL</b>	$\frac{4}{2}$		

					Co	ourse A	rticulat	tion Ma	atrix: (N	Iapping	of COs v	with POs	and PSC	Os)			
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	POQ	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO/	PSO5
СО	101	102	105	104	105	100	107	100	10)	1010	1011	1012	1501	1502	1505	1304	1505
CO1	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-
CO2	1	3	1	3	-	-	-	1	3	-	-	3	-	2	-	2	-
CO3	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	-	1	-
CO5	1	3	1	2	-	-	-	1	2	-	-	2	-	1	-	1	-

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

Attributes	& SDGs

Course Code	Course Title		Attributes									
PT106	HUMAN PHYSIOLOGY-I	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	No.			
		Employability		Development	Equality	Sustainability	Value	Ethics				
	LAB	1	4	4	4		1	1	3,4			



Effective from Session: 2022-23											
Course Code	PT107	Title of the Course	<b>BIOCHEMISTRY LAB</b>	L	Т	Р	С				
Year	Ι	Semester	Ι	0	0	2	1				
Pre-Requisite	Nil	Co-requisite	Nil								
Course Objectives	The student v	he student will be able to demonstrate knowledge in clinical as needed for the study and practice of physiotherapy.									

l		Course Outcomes
	CO1	To understand about carbohydrate& its application in therapeutic exercises and rehabilitation of sport injury.
	CO2	To understand about protein& its application in practice of physiotherapy during rehab of various disease, trauma and fitness training.
	CO3	To understand about lipid and nucleic acid& its application in practice of physiotherapyduring rehab of various disease, trauma and fitness
		training.
	CO4	To understand about vitamin and enzyme and hormones & its application in practice of physiotherapy during rehab of various disease, trauma
		and fitness training.
ſ	CO5	To understand about Nutrition and its application in practice of physiotherapy during rehab of various disease, trauma and fitness training.

Unit Contact Mapped Title of the Unit **Content of Unit** Hrs. No. CO Practical aspect of followings: CARBO 1. Glycolysis. 1 4 CO1 HYDRATE 2. TCA cycle. 3. Hormonal regulation of blood glucose, HbA1C and GTT. Practical aspect of followings: 1. Amino acids-protein structure 2. Effect of temperature on proteins- denaturation-coagulation; isoelectric pH & its importance 2 PROTEIN CO2 4 3. Decarboxylation- De-amination 4. Trans methylation transamination & their importance-Detoxification of ammonia including urea cycle. 5. Clinical biochemistry: Relevance of blood levels of, urea, & uric acid, Protein in urine. Practical aspect of followings: 1. Fatty acids LIPIDS 2. lipids— $\beta$  oxidation of saturated fatty acids and its energetics and regulation of fat 3 AND 4 CO3 metabolism in adipose tissue Ketone bodies formation & utilization., NUCLIC ACID cholesterol/HDL/LDL/VLDL etc, Liver function test & Renal function test. 3. Genetic code-catabolism of purine -gout. Practical aspect of followings: VITAMINS 1. Enzymes, properties, mechanism of action, Clinical importance & regulation of activity & CO4 4 2. Hormones. 4 ENZYMES 3. Mechanism of hormone action, Effects of hormones on various metabolism & hormonal & HORMONES disorders. Practical aspect of followings: NUTRITION & 1. Balance diet, Nutritional disorder, SDA (special dynamic action) 5 4 CO5 SPECIAL TOPICS 3. Respiratory quotient (RQ) & Basal Metabolism rate (BMR) 4. Water electrolyte balance & acid base balance. **Reference Books:** 

1. Fundamentals of Biochemistry-by Dr. Deb Jyoti Das,

Essentials of Bio-chemistry by U. Satyanarayan, 1st Edition, Books and Allied Publications.
 Textbook of Biochemistry –Chatterje and Shinde

Text book of Medical Bio-Chemistry – Dr. M.N. Chettergee, 5th Edition, Jaypee Publication.
 Fundamental of Bio-Chemistry –Dr. A. C .Deb, 5th Edition, Central Publication.

e-Learning Source:

1. https://youtu.be/t5DvF5OVr1Y

2. <u>https://youtu.be/gggC9vctvBQ</u>

3. https://youtu.be/ufvZ8bYtyO8

4. https://youtu.be/Q6R4o-oECxs

					Co	ourse A	rticula	tion Ma	trix: (N	lapping	of COs v	with POs	and PSC	Os)			
PO-PSO	DO1	DOJ	DO2	DO4	DO5	DO6	DO7	DOS	DOO	DO10	DO11	DO12	DSO1	DSO2	DSO2	DSO4	DSOS
СО	FOI	FO2	F03	F04	F05	100	F07	FU8	F09	FOID	FOIT	F012	1301	F302	1303	1304	1303
CO1	1	3	2	2	-	-	-	1	2	1	-	2	-	2	2	1	-
CO2	1	3	1	3	-	-	-	2	3	-	-	3	-	1	1	1	-
CO3	1	3	1	2	-	-	-	1	2	2	-	2	-	1	1	1	-
CO4	1	3	1	2	-	-	-	1	3	-	-	3	-	1	2	1	-
CO5	1	3	1	2	-	-	-	1	2	1	-	2	-	1	1	1	-

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

Attributes & SDGs

Course Code	Course Title			Att	ributes				SDGs
		Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	No.
PT107	BIOCHEMISTRY LAB	rse Title     Attributes     SI       MISTRY LAB     Employability     Entrepreneurship     Skill     Gender     Environment &     Human     Professional     M       Image: Mission of the state of the stat	1						
		4	1	1	1		1	1	3,4



Effective from Session	Session: 2015-16													
Course Code	PT108	Title of the Course	<b>BASICS OF ELECTROTHERAPY</b>	L	Т	Р	С							
Year	Ι	Semester	Ι	0	0	2	1							
Pre-Requisite	Nil	Co-requisite	Nil											
Course Objectives	The student will be of physiotherapy.	e able to demonstrate t	he practical knowledge in human anatomy as needed for	the s	tudy an	d prac	tice							

	Course Outcomes
CO1	Physical Principles: To understand basic principles of physics, Laws of Electricity, Electro-magnetic spectrum & its application in practice of
	physiotherapy.
CO2	Effects of Current Electricity: To understand basic principles of electric current& its application in practice of physiotherapy.
CO3	Electrical Supply: To understand basic of electrical supply its application in practice of physiotherapy.
CO4	Various Agents: To understand basic of various agents & its application in practice of physiotherapy.
CO5	Circuit Diagrams and Basic Knowledge of Equipment's: To understand circuit diagrams and basic knowledge of equipment's& its application
	in practice of physiotherapy.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	PHYSICAL PRINCIPLES	Demonstration of followings:         1.       Diode and Triode valves         1.       Transistors, Ammeter         2.       Voltmeter, Rheostat         3.       Resistance Box, Transformer         4.       Stimulator	4	CO1
2	EFFECTS OF CURRENT ELECTRICITY	Demonstration of followings:         1. AC current         2. DC Current         3. Faradic Current         4. Galvanic current         5. Micro current         6. Russian currents	4	CO2
3	ELECTRICAL SUPPLY	Demonstration of followings:           1. Main supply         2. Clinical observation of equipment placement.	4	CO3
4	VARIOUS AGENTS:	Demonstration of followings:           1.         Electophysical agents           2.         Clinical observation of equipment placement	4	CO4
5	CIRCUIT DIAGRAMS AND BASIC KNOWLEDGE OF EQUIPMENTS	Demonstration of followings:         1.       Short Wave Diathermy         2.       Micro Wave Diathermy         3.       LASER         4.       Ultrasound         5.       Clinical observation of equipment placement	4	CO5
Referen	ce Books:			
1. Clayto	on's Electrotherapy (theory	and practice) – Clayton's AIBS publications.		
2. Electro	otherapy Explained by Joh	n Low and Reed, 3rd edition, B & H Publications.		
4 Electr	otherapy Evidence Base	d Practice by Kitchen Sheild 11th ed		
5. Physic	cal Agents in Rehabilitati	on: From Research to Practice by Cameron.		
e-Lea	rning Source:			
1 <u>htt</u>	os://youtu.be/P_RQuRzp7	<u>'SE</u>		
2 <u>http</u>	os://youtu.be/G7UccfwRv	<u>vwY</u>		
3 <u>http</u>	os://youtu.be/dNnTubgY2	2 <u>gs</u>		
4 <u>httr</u>	os://youtu.be//OkyTUZel	<u>pw</u>		

					C	Course A	Articula	ation M	[atrix: (]	Mapping	g of COs	with PO	s and PS	SOs)			
PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	DO8	POO	PO10	PO11	PO12	DSO1	DSO2	DSO3	DSO4	DSO2
СО	101	102	105	104	105	100	107	100	109	1010	1011	1012	1301	1302	1305	1504	1305
CO1	2	3	2	2	-	-	-	1	2	-	-	2	3	3	3	3	-
CO2	1	3	1	2	-	-	-	2	3	-	-	3	3	3	2	2	-
CO3	1	3	2	1	-	-	-	1	2	-	-	2	2	2	1	2	-
CO4	1	3	1	2	-	-	-	1	3	2	-	3	2	3	1	3	-
CO5	1	3	1	2	-	-	-	1	2	2	-	2	3	1	2	2	2

Course Code	Course Title		Attributes											
	PASICS OF	Employability	Entropyon ovyashin	Skill	Gender	Environment &	Human	Professional	No.					
PT108	ELECTROTHER ADV	Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics						
	ELECTROTHERAPY	1	√	1	√		1	√	3,4					



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

# **DEPARTMENT OF PHYSIOTHERAPY**

# BACHELOR OF PHYSIOTHERAPY (BPT) SYLLABUS YEAR/ SEMESTER: I/II



Effective	from Session: 2	022-23									
Course C	Code	P	Г109	Title of the Course	HUMAN ANATOMY-II	L T	Р	С			
Year			I	Semester	II	3 1	0	4			
Pre-Requ	isite		Nil	Co-requisite	Nil						
Course O	Objectives	To under	stand the loca	ation, structural configurati	ion of the thoracic region, abdomen and brain & its application in pr	actice of phy	siotherap	y.			
					C						
CO1	Tounderstand	about the s	tructure of th	oracic wall& its application	n in practice of physiotherapy						
C01	To understand a	about the y	Viscera of tho	racic cavity & its application	on in practice of physiotherapy.						
CO3	To understand a	about the /	Abdomen and	Pelvis& its application in	practice of physiotherapy.						
CO4	To understand a	about the I	Head and Nec	k & its application in pract	ice of physiotherapy.						
CO5	To understand a	about the l	Neuro Anaton	ny and its application in pra	actice of physiotherapy.						
T 1 #4						Carata at	M				
No.	Title of the	Unit	1 Chalatan		Content of Unit	Hrs.	C	pea O			
1	THORACIC	WALL	<ol> <li>Skeleton (2)</li> <li>Joints of t</li> <li>Muscles of</li> <li>Nerves of</li> <li>Relevant (2)</li> </ol>	of thoracic wall, Thoracic C thoracic wall, Movements c of thoracic wall, Fascia of T Thoracic wall, Vasculatur applied anatomy	of thoracic wall Fhoracic wall e of Thoracic wall, Breast	8	СС	)1			
2	VISCERA THORACIC C	OF AVITY	<ol> <li>Pleura, Lu</li> <li>Overview</li> <li>Diaphrag</li> <li>Layer of J</li> <li>Location Brachioce</li> </ol>	ungs, and Tracheobronchia of mediastinum, superior m: Attachments, action and pericardium, Introduction to and branches of ascending ephalic veins and superior v	l Tree mediastinum, Posterior mediastinum, anterior mediastinum l nerve supply of diaphragm. o heart, External feature and blood supply of heart g arch of aorta and descending aorta, Location and tributaries of vena cava. Azygos system of veins	8	CC	)2			
3	ABDOMEI PELVIS	Brachiocephalic veins and superior vena cava. Azygos system of veins           Brachiocephalic veins and superior vena cava. Azygos system of veins           1         Introduction to abdomen, its regions and quadrants, Abdominal wall, layers of abdominal wall           2         Muscles of anterior and posterior abdominal wall their origin insertion, action and nerve suppresent.           3         Overview of abdominal viscera and digestive tract.           4         Components of urinary system, their location and orientation in abdomino-pelvic cavity. B account of kidneys.           5         Reproductive system: Components of male & female reproductive system and their location.									
4	HEAD AND )	NECK	<ol> <li>Overvie</li> <li>Scalp an</li> <li>Muscles</li> <li>Layers of digastric</li> <li>Triangle</li> <li>Commo</li> <li>Joints: D</li> </ol>	w of different aspect of cra ad muscles of facial express of mastication, their origin of deep cervical fascia, extec c and strap muscles of neck es of neck: Subdivision of a n carotid & external carotic Details of temporomandibul	nium sion, Layers of scalp, nerve and blood supply n, insertion action and nerve supply ent and attachment of investing layer, Sternocleidomastoid,  interior and posterior triangle and their contents. d artery & Internal Jugular vein. lar joint, atlantoaxial and atlanto-occipital joint.	8	CC	)4			
5	NEURO-ANA	ТОМҮ	1Genera2Crania3Neuro-4Import5Brief a6CSF –	al organization of C.N.S and l nerves -Peripheral nervou -muscular junction,Neuro-r ant ascending and descendi ccount of visual and audito Formation, absorption and	d brief outline of CNS structures, Blood supply of brain is system,Autonomic Nervous System -Sensory system nuscular integration ing tracts. Cranial nerves ory path way circulation in the ventricular system.	8	СС	)5			
Referenc	e Books:										
1 B	.D. Chaurasia's,	Human A	natomy-Volui	me 1, 2, 3 CBS Publishers	& Distributors.						
2 II	nderbir Singh, Te	xtbook of	Anatomy wit	h Colour Atlas-Vol. 1, 2, 3	Jaypee Brothers.						
3 S	nell-Clinical Ana	tomy by r	egions -Lippi	ncott.							
4 N	IcMinn's Last's	Anatomy-l	Regional and	applied, Churchill Livingst	tone.						
<u> </u>	unningham Man	ual of Prac	tical Anatom	y Vol. I, II, III, Churchill L	Livingstone.						
6 V 7 E	villiams & Warw	ick, Gray'	s Anatomy-C b	nurchill Livingstone.							
/ E	acio Anstorny e	Dhysiolos	u u hu Smout a	nd McDowell							
0 D	asic Anatomy &	1 119 510109	y by Shibut a								
e-Leari	ning Source:	EVZZDU	4								
1 https:	//youtu.be/X5RU	ALK	4								
2 <u>https:</u>	//youtu.be/060_2	<b>MARKWUO</b> E	2								

3 https://youtu.be/4Sab-2E4ZDI

						Cou	ırse Art	iculatio	n Matrix	: (Mappi	ng of COs	with POs	and PSOs)	)			
PO-PSO	PO1	PO2	PO3		PO5	PO6	PO7	POS	POQ	PO10	PO11	PO12	DSO1	DSO2	DSO3	DSO4	DSO5
CO	101	102	105	104	105	100	107	108	109	1010	1011	1012	1301	1302	1305	1304	1305
CO1	1	3	1	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO2	1	3	2	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO3	1	3	1	2	-	-	-	1	1	1	-	3	2	1	1	1	1
CO4	2	3	1	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO5	1	3	1	2	-	-	-	1	1	1	-	3	2	1	1	1	1

Course Code	Course Title			Att	ributes				SDGs
		Employability	Entropropourship	Skill	Gender	Environment &	Human	Professional	No.
PT109	HUMAN ANATOMY-II	Employability	Entrepreneurship	Development	Equality	Sustainability	Value	Ethics	
		1	1	4	V		1	7	3,4



Effective from Sessio	Silective from Session: 2022-25													
Course Code	PT110	Title of the Course	HUMAN PHYSIOLOGY-II	L	Т	Р	С							
Year	Ι	Semester	П	3	1	0	4							
Pre-Requisite	Nil	Nil     Co-requisite     Nil												
<b>Course Objectives</b>	The student will be a	he student will be able to demonstrate knowledge in human physiology as needed for the study and practice of physiotherapy.												

	Course Outcomes
CO1	To understand about excretory function& its application in practice of physiotherapy.
CO2	To understand about gastro intestinal tract& its application in practice of physiotherapy.
CO3	To understand about Nervous system and special senses its application in practice of physiotherapy.
CO4	To understand about Endocrine system & its application in practice of physiotherapy.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	EXCRETORY FUNCTION	<ol> <li>General introduction, structure and functions of kidney, Formation of urine- filtration, re- absorption and secretion</li> <li>Physiology of micturition, Renal circulation, Plasma clearance test</li> <li>Neurogenic bladder, Automatic bladder</li> <li>Relevant applied physiology</li> </ol>	8	CO1
2	GASTRO INTESTINALTRACT (GIT)	<ol> <li>Motility nervous control, blood circulation</li> <li>Composition, secretary function of saliva gastric juices</li> <li>HCL secretion, pancreas gall bladder and small intestine</li> <li>Digestion and absorption of food, Defecation and swallowing reflex</li> <li>Relevant applied physiology</li> </ol>	8	CO2
3	NERVOUS SYSTEM & SPECIALSENSES	<ol> <li>Receptor physiology, synaptic structure, reflexes, physiology of touch, pain, temperature and Proprioception, labyrinth.</li> <li>Function of sensory and motor cortex, ascending and descending tracts, motor function of spinal cord and reflexes, spinal cord transaction and spinal shock</li> <li>Hypothalamus, thalamus, basal ganglia, cerebellum, limbic system, RAI system, learning memory and condition reflex</li> <li>Posture, equilibrium and sleep, cerebral blood flow, CSF and brain metabolism</li> <li>Eye, Ear, Olfaction, Taste.</li> <li>Relevant applied physiology</li> </ol>	8	CO3
4	ENDOCRINE SYSTEM	<ol> <li>General organization of endocrine glands</li> <li>Releasing hormones from hypothalamus, Anterior &amp; Posterior pituitary hormones – physiological actions, regulation &amp; disorders</li> <li>Thyroid Hormones, Parathyroid Hormones – physiological actions, regulation &amp; disorders</li> <li>Pancreatic hormones, Adrenal cortex &amp; medulla– physiological actions, regulation&amp; disorders</li> <li>Mechanism of hormone action, Relevant applied physiology</li> </ol>	8	CO4
5	REPRODUCTIVE SYSTEM	<ol> <li>Female menstrual cycle and related hormone puberty and menopause</li> <li>Function of oestrogens, progesterone and testosterone</li> <li>Male spermatogenesis and function of testosterone,</li> <li>Sucking reflex- pregnancy and lactation.</li> <li>Relevant applied physiology</li> </ol>	8	CO5
Refere	ence Books:			
1. C	Concise Medical Physiology by	y Chaudhuri, 4th Edition; New Central Book Agency.		
2. F	A Textbook of Practical Physic	ann, 4m eu, Jaypee Brothers.		
4. F	Practical physiology by Vijava	Joshi; Vora Medical Publication.		
5. I	Human Physiology, Chatterjee	. Vol: 1&2; 10th Edition; Medical & Allied Agency		
6. T	extbook of Medical Physiolog	gy by Guyton & Hall, 11th Edition; Elsevier Publication		
7. S	amson Wright's Applied Phys	siology 13th ed, Keele CA, Neil E & Joels N, Oxford Medical Pub.		
8. P	rinciples of Anatomy & Physic	ology, Tortora, 8th Edition; Harper & Row Publication.		
9. I	erring Source:	ng		
1 F	arming oour ce:	7k		
2. k	https://youtu.be/cXPuW6ZwcF			
3. h	attps://youtu.be/VAEmxt78bB	<u>≠</u> I		
4. <u>k</u>	nttps://youtu.be/vLdNX5Te1X	- 0		

		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	101	102	105	104	105	100	10/	100	10)	1010	1011	1012	1501	1502	1505	1504	1303
CO1	1	3	1	2	-	-	-	1	2	-	-	2	2	1	-	1	1
CO2	1	3	1	3	-	-	-	1	3	-	-	3	3	2	-	1	1
CO3	1	3	1	2	-	-	-	1	2	-	-	2	3	1	-	1	1
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	1
CO5	1	3	1	2	-	1	-	1	2	-	-	2	2	1	-	1	1

Course Code	Course Title		Attributes S										
PT110	HUMAN PHYSIOLOGY- II	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.				
		4	1	4	4		1	1	3,4				



Effective from Sessio	Effective from Session: 2022-23										
Course Code	PT111	Title of the Course	BASIC OF EXERCISE THERAPY	L	Т	Р	С				
Year	Ι	Semester	Π	3	1	0	4				
Pre-Requisite	Nil	Co-requisite	Nil								
Course Objectives	The student will be a	The student will be able to learn, analyze and explore the knowledge of basics of exercise therapy.									

	Course Outcomes								
CO1	To understand about Mechanical principles of exercise& its application in practice of physiotherapy.								
CO2	To understand about Mechanics of movement & its application in practice of physiotherapy.								
CO3	To understand about Simple Mechanics& its application in practice of physiotherapy.								
CO4	To understand about Fundamental and Derived Position& its application in practice of physiotherapy.								
CO5	To understand about Introduction to movements & its application in practice of physiotherapy.								

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	MECHANICAL PRINCIPLES OF EXERCISE	<ol> <li>Force and composition of force and their alteration and application in human body</li> <li>Gravity, COG, LOG, and their alteration and application in human body</li> <li>Base of support, Equilibrium and their alteration and application in human body</li> <li>Fixation stabilization and their alteration and application in human body</li> </ol>	8	CO1
2	MECHANICS OF MOVEMENT	<ol> <li>Axis and plane and its application in physiotherapy</li> <li>Power, Work, Energy and its application in physiotherapy</li> <li>Velocity, Motion and its law its application in physiotherapy</li> <li>Momentum, Inertia, Friction and its application in physiotherapy</li> </ol>	8	CO2
3	SIMPLE MECHANICS	<ol> <li>Levers and their Functions and classification and application in human body</li> <li>Pulleys and their Functions and classification, and application in human body</li> <li>Inclined Planes and their Functions, classification &amp; theirs clinical relevance.</li> <li>Stress, Strain, Hooke's Law Springs and their properties &amp; theirs clinical relevance.</li> </ol>	8	CO3
4	FUNDAMENTAL AND DERIVED POSITION	<ol> <li>Fundamental position of human body effects, muscles uses and their importance</li> <li>Role of fundamental position in physiotherapy practice</li> <li>Derived position of human body, effects, muscles uses and their importance's.</li> <li>Role of Derived position in physiotherapy practice</li> </ol>	8	CO4
5	INTRODUCTION TO MOVEMENTS	<ol> <li>Active range of motion, Passive range of motion</li> <li>Active assisted range of motion, Resisted range of motion,</li> <li>Types of muscle contraction and their clinical relevance</li> <li>Nervous control of movement</li> </ol>	8	CO5
Referen	ce Books:			
1.	Practical Exercise Ther	apy-Hollis and Cook		
3	3 Norkins & White F	A Davis Measurement of Joint Motion: A Guide to Goniometry		
4.	Kisner and Colby. F.A	A. Davis, Therapeutic Exercises Foundations and Techniques		
5.	Margarett Hollis, Mas	sage for therapist: Margarett Hollis		
e-Lea	rning Source:			
1.	https://youtu.be/X5RU	JFXZZBH4		
2.	https://youtu.be/060	XNKwuOE		
3	https://youtu.be/4Sab.	-2F4ZDI		

		Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	DO1	DO3	DO3	DO4	DO5	DO6	DO7	DOS	DOO	<b>DO10</b>	DO11	DO12	DSO1	DSOJ	DSO3	DSO4	DSO5
CO	FOI	1 102	FUS	F04	F05	100	FO/	FUo	F09	F010	rom	FO12	1501	F302	1303	1504	1505
CO1	2	3	-	2	1	-	-	-	1	1	-	1	2	1	3	2	1
CO2	1	3	-	2	-	-	-	-	1	-	-	1	2	1	3	2	1
CO3	2	3	-	2	-	-	-	-	1	1	-	1	2	1	3	2	1
CO4	1	3	-	1	-	-	-	-	1	-	-	1	2	1	3	2	1
CO5	2	3	-	1	-	-	-	-	1	-	-	1	2	1	3	2	1

Course Code	Course Title		Attributes								
PT111	BASIC OF EXERCISE THERAPY	Employability Entrepreneurship		Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.		
		1	4	Â,	1	, , , , , , , , , , , , , , , , , , ,	4	1	3,4		



Effective from Sessio	<b>m:</b> 2022-23								
Course Code	PT112	Title of the Course	GENERAL PSYCHOLOGY AND SOCIOLOGY	L	Т	Р	С		
Year	Ι	Semester	П	2	1	0	3		
Pre-Requisite	Nil	Co-requisite	Nil						
<b>Course Objectives</b>	The student will be	The student will be able to demonstrate knowledge in clinical as needed for the study and practice of physiotherapy.							

	Course Outcomes
CO1	To understand about psychology& its application in physiotherapy practice.
CO2	To understand about arousal, emotion & awareness, perception & its application in physiotherapy practice.
CO3	To understand about testing, personality and behaviour, attitude & its application in physiotherapy practice.
CO4	To understand about basics of sociology and social factors in health & disease& its application in physiotherapy practice.
CO5	To understand about social group, family, culture and health, social problems& its application in physiotherapy practice.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO						
1	BASICS OF PSYCHOLOGY	<ol> <li>Beginning the study of psychology &amp; Subfields and methods of psychology, Genetics and behaviour, Nature and nurture</li> <li>Development of behavior and principle of learning</li> <li>Thinking and problem solving</li> </ol>	6	CO1						
	AROUSAL, EMOTION	<ul><li>4. Drives and motivation</li><li>1. Psychological basis of arousal &amp; emotion Emotional feelings &amp; Situations</li></ul>								
2	& AWARENESS, PERCEPTION	<ol> <li>Objective Perception , Perceptual Constancies</li> <li>Depth Perception, Influences on Perception</li> </ol>	6	CO2						
3	TESTING, PERSONALITY AND BEHAVIOR, ATTITUDE	6	CO3							
4	BASICS OF SOCIOLOGY AND SOCIAL FACTORS IN HEALTH & DISEASE	6	CO4							
5	SOCIAL GROUP, FAMILY, CULTURE AND HEALTH, SOCIAL PROBLEMS	<ol> <li>Concept of culture , Culture and behaviour ,Culture and Health Disorders</li> <li>Population explosion, Poverty and unemployment</li> <li>Beggary , Juvenile delinquency</li> <li>Alcoholism , Problems of women in employment</li> </ol>	6	CO5						
Referen	ce Books:									
1.	Fundamentals of Biocher	nistry-by Dr. Deb Jyoti Das,								
2.	Textbook of Biochemistr	ry by U. Salyanarayan, 1st Edulon, Books and Allied Publications.								
4.	Text book of Medical B	io-Chemistry – Dr. M.N.Chettergee, 5th Edition, Jaypee Publication.								
5.	<ol> <li>Fundamental of Bio-Chemistry – Dr.Dr.A.C.Deb, 5th Edition, Central Publication.</li> </ol>									
6.	6. Bio-Chemistry introduction – Mekee, 2nd Edition, McGraw-Hill Publication									
e-Lea	rning Source:									
1.	https://youtu.be/PqRvnUof	NCU								
2.	https://youtu.be/a1oHRj_t	Bw								
3.	https://youtu.be/gfivijJKiks	<u>τρυ</u> ζtΜ								

		Course Articulation Matrix: (Mapping of COs with POs and PSOs)															
PO-PSO	DO1	DOD	DO2	DO4	DOS	DOC	DO7	DOP	DOO	DO10	DO11	DO12	DCO1	DEOD			DCOF
СО	POI	PO2	P03	P04	P05	P06	PO/	P08	P09	P010	POIT	PO12	PS01	PS02	PS05	P504	PS05
CO1	2	-	-	1	-	3	3	2	2	-	2	2	-	-	-	-	1
CO2	2	-	-	2	-	3	2	2	1	-	2	3	-	-	-	-	2
CO3	2	-	-	1	-	3	3	1	2	-	1	2	-	-	-	-	1
CO4	2	-	-	1	-	3	3	2	1	-	2	3	-	-	-	-	1
CO5	2	-	-	2	-	3	2	2	1	-	2	2	-	-	-	-	1
					2						~ .						

Course Code	Course Title		Attributes       ability     Entrepreneurship     Skill     Gender     Environment &     Human     Professional       bevelopment     Equality     Sustainability     Value     Ethics						SDGs
	GENERAL	Employability	Entrepreneurship	Skill	Gender	Environment &	Human	Professional	No.
PT112	PSYCHOLOGY AND	Employability	Entrepreneursnip	Development Equality Sustainability	Value	Ethics			
	SOCIOLOGY	4	4	4	4		*	4	3,4



Effe	ctive fr	om Sess	ion: 2	015-16							,							
Cou	rse Coo	de		Ε	S101		Title	e of the	Course			ENVIRO	NMENTA	L STUDIE	S	L	Т	P C
Year	r				I		Sem	ester					II			2	1	0 3
Pre-	Requis	ite			Nil		Co-i	requisit	e		Nil							
			То	study a	bout th	e Envii	onmen	t and th	ne Ecosy	stem.								
			То	study a	bout th	e Natu	al Res	ources.										
Cou	rse Obj	jectives	То	study a	bout B	iodiver	sity and	d Conse	ervation.									
			10	study E	nviron	mental	polluti	on, its	policies a	and pract	lices.							
			10	study F	iuman	Popula	tion and	a Envii	onmenta	Course (	Jutaamaa							
COI		Gain kno	wledge	about e	nvironn	ent and	ecosyst	em		Course	Jutcomes	1						
CO2		Students	will lea	rn about	t natural	resourc	e. its im	portanc	e and env	ironmenta	al impacts	of human	activities on	natural resou	irce.			
CO3	3 (	Gain kno	wledge	about th	ne conse	rvation	of biodi	versity	and its im	portance.	1							
CO4	1	Aware st	udents a	about pr	oblems	of envir	onmenta	al pollut	ion, its im	pact on h	uman and	l ecosystem	n and control	measures.				
COS	5 5	Students	will lea	rn about	t increas	se in pop	ulation	growth	and its im	pact on e	nvironme	nt.						
Un No	iit	Title of the Unit     Content of Unit												Conta	act	CO		
140	<i>.</i>		Environment its components and segments Multidisciplinary nature of Environmental										1113	•	0			
		Intro	duction	n to	studi	es. Cor	icept o	f Susta	inability	and sust	ainable	developm	ent. Enviro	nmental mo	ovements.			
1		Enviro	onment	and	Ecos	vstem,	Structu	ire & I	Function.	Energy	flow in	the Ecosy	vstem, Eco	logical Pyra	mids and	6		CO1
		Eco	osysten	n	Ecol	ogical S	Success	sion.	,	0.			, ,	0 5				
2		Natura	1 Reco	trees	Rene	wable	and no	n-rene	wable, S	oil erosi	on and o	lesertifica	tion, Defor	estation, W	ater: Use	6		CO2
2		matura	1 175200	11005	and o	over exp	ploitati	on, Imp	pacts of l	arge Daı	ns, Case	studies				0		002
		Biodi	versity	and	Leve	ls of b	ologica	al dive	rsity, Ho	t spots c	of biodiv	ersity, Inc	tia as a Me	ega Diversit	y Nation,			
3		Con	servati	on	Enda	ndangered and endemic species of India, Threats to Biodiversity, Conservation of										6		CO3
					B10d	iversity	, Ecos	ystem a	ind biodi	versity s	ervices.	111 62			1.	──		
		Envi		stol	Envi	ronmer	ital pol	lution,	Solid wa	aste man	agement	, III effect	ts of firewo	orks, Climat	e change,			
4		Dolluti	on Dol	liaion	Envi	ronmor	tol I	uon, a	ciù fain	and III	pacts of	A ot W	ildlifo <b>pr</b> o	tootion Ag	t Eorost	6		CO4
4		ronuu	OII, FOI Practic	res	CODS	ervation	n Δ ct (	lws. I Conver	tion on 1	Biologic	al Diver	sity (CBD	)) Tribal ri	ohts Huma	n wildlife	0		004
		and	1 factic		conflicts.													
		Human	Popul	ation	Hum	an po	pulatio	n gro	wth: Im	pacts o	on envi	ronment.	human l	nealth and	welfare.			
5		a	nd the		Rese	Resettlement and rehabilitation of project affected persons. Environmental ethics										6		CO5
		Env	ironme	nt	Envi	ronmer	tal con	nmunic	ation and	d public	awarene	ss, case st	udies.					
Refe	erence l	Books:																
1) A	garwal,	K.C. 20	01 Envi	ironmen	tal; Bio	logy, Ni	di Pub.	Ltd. Bik	aner.									
2) B	harucha	a Erach, '	The Bio	diversit	y of Ind	ia, Mapi	n Pub. I	Pvt. Ltd	., Ahemda	ıbad-380,	India.							
3) B	runner l	R.C. 198	9. Haza	rdous w	aste inc	ineratio	n, Mc G	raw Hil	1									
4) C	lark R.S	S. Marine	2001 c	ion, Clai	TH Go	rhani E	ford (T	B) worth E	nvironme	ntal anov	clonadia	Jacob Dubl	lication Hou	a Mumbai				
6) D	e. A.K.	Environ	mental	chemist	rv Wille	v Easter	n Limit	ed.	anvironnie	intar ency	ciopeuia,	Jacob I ubi		se, munibai.				
7) G	lick, H.	P.1993 v	vater in	crisis, F	Pacific In	nstitute	for studi	es in de	v, Enviro	nment &	security,	Stockholm	Env, Institut	e, Oxford Un	iv, Press 47	3 p.		
8) H	awkins	R .E. En	cyclope	edia of I	ndian N	atural H	istory, I	Bombay	Natural H	History Sc	ciety, Bo	mbay.						
9) H	eywood	1, V.H. 8	z Watso	n, R. T.	1995.GI	obal bic	diversit	y Asses	sment.Ca	mbridge U	Jniv. Pres	ss 1140 p.						
10) J	adhave	e, H. and	Bhosale	e, V. M.	1995 E	nvironn	iental pr	otection	and laws	, Himalay	a pub, ho	ouse, Delhi.	.284 p.					
11)1 12)1	Mhaska	r A K N	and So Iatter H	azardou	s Tech	o Enviro 10 Scien	ce Pub	(TM)	e systems	and solu	lions, wet	) ennanced	edition 659	p.				
13)1	Miller T	Г.G. Jr, E	Inviron	nental E	cology,	W. B. S	aunders	Co.US	A,574 p.	16								
14) (	Odum, I	E.P.1997	.Fundai	mental c	hemistr	y, Goel	Pub Ho	use Mee	erut.									
15) \$	Survey	of the Er	nvironm	ent, The	Hindu	(M).												
16) \$	Sharma	В.К.200	1.Envir	onment	al Chem	ustry, G	oel Pub	House	Meerut									
e-l	Learnir	ng Sourc	e:															
https	s://byjus	s.com/bio	ology/di	ifference	e-betwe	en-envir	onment	-and-eC	Osystem.									
https	://www	v.youtub	e.com/w	vatch?v=	-dRP147	B8w7k												
https	s://www	v.youtube	e.com/w	atch?v=	=3fbEV	ytyJCk	hindira											
https	5://www	v.vedanu	rld/on/	lology/c		non-or-		sity	nition/									
https	s://bvius	s.com/hi	ology/di	ifference	e-betwe	en-envir	onment	-and-eC	Osystem									
	Jac		- 07, ai				Cour	se Artic	ulation N	Aatrix: (N	Janning	of COs wit	th POs and	PSOs)				
PO-							Cour						05 unu					
PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO																		
CO1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
CO2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	<u> </u>
CO3	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
C04	-	-	-				1	1	-	-	- 1	2	-	-	-	- 1	1	+ -
200	l	1	L	1	I	1	1- Low	Correl	ation; 2-	Moderate	e Correla	tion; 3- Su	ıbstantial C	orrelation		-	1	
							Δt	tributes	& SDCs	Commo	n for all l	hranches/T	Disciplines					

Course Code	Course Title		Attributes										
	F ' (1	Employshility	Entropyonovashin	Skill	Gender	Environment &	Human	Professional	SDGs No.				
ES01	Environmental	Employability	Entrepreneursnip	Development	Equality	Sustainability	Value	Ethics					
	Studies					$\checkmark$			6,13,14,& 15				



Course CodeLN202Title of the CourseADVANCE PROFESSIONAL COMMUNICATIONLTPCYearISemesterIO3Pre-RequisiteNilCo-requisiteNil2103Course ObjectivesThe objective is focusing on improving communication skills within a wide array of sectors. The students will feel confident in	Effective from Sessi	on: 2015-16	5										
YearISemesterI2103Pre-RequisiteNilCo-requisiteNilCourse ObjectivesThe objective is focusing on improving communication skills within a wide array of sectors. The students will feel confident in	Course Code	LN202	Title of the Course	ADVANCE PROFESSIONAL COMMUNICATION	L	Т	Р	С					
Pre-Requisite         Nil         Co-requisite         Nil           Course Objectives         The objective is focusing on improving communication skills within a wide array of sectors. The students will feel confident in	Year	Ι	Semester	I	2	1	0	3					
<b>Course Objectives</b> The objective is focusing on improving communication skills within a wide array of sectors. The students will feel confident in	Pre-Requisite	Nil	Co-requisite	Nil									
	Course Objectives	The objectiv	The objective is focusing on improving communication skills within a wide array of sectors. The students will feel confident in										

	Course Outcomes								
CO1	Reading & Listening Comprehension: To Develop Coherence, Cohesion and Competence in Oral Discourse through Intelligible Pronunciation								
CO2	Writing Skills: To Develop and Expand Writing Skills through Controlled and Guided Activities								
CO3	Group Discussion And Interview Skills: To feel confident in workplace communication and handle the interview process confidently								
CO4	Presentation Skills: To understand about the advance and efficient presentation skills.								
CO5	Project Work: To understand about the writing reports and project development.								

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
		1. Ways to improve the Speed & Efficiency of Reading		
1	READING &	2. Importance of Skim Reading	6	CO1
1	COMPREHENSION	3. Listening Skills & Features of Effective Listening	0	COI
	COMI REHENSION	4. Benefits of Effective Listening		
		1. C V & Resume writing		
		2. Job Application letter/Covering letter		
2	WRITING SKILLS	3. Precis: Principles of Condensation	6	CO2
		4. Paragraph writing		
		5. Development of Paragraph		
		1. Group Discussion: Meaning & Significance, How to prepare & practice for GD, Common		
		Pitfalls in a GD		
2	GROUP	2. Interview: Definition, Skills & Techniques	<i>.</i>	<b>CO</b> 2
3	DISCUSSION AND	3. Preparation of Interview	6	003
	INTERVIEW SKILLS	4. Negative Interview Factors		
		5. Interview Tips		
	PRESENTATION	1. Presentation Strategies: Purpose, Audience and Locale, Organizing Contents	-	004
4	SKILLS	2. Audio-Visual Aids, Nuances of Delivery, Body Language, Voice Dynamics	0	04
		1. At the commencement of the semester, the student would be assigned a topic by the		
5		Teacher/Instructor. They will research it & submit a duly documented report of about 20-	6	CO5
5	FROJECT WORK	25 pages by the end of the semester.	0	005
		2. Role of Information Technology in Environment and Human Health, Case studies		
Refere	nce Books:			
1. Rar	nan, Meenakshi & Sharma	, Sangeeta. Technical Communication: Principles and Practice, Oxford University Press-2013.		
2. Kor	har, Nira. Communication	Skills For Professionals, PHI Learning Pvt. Ltd -2011		
3. Boa	and of Editors. Written and	Spoken Communication in English, UniversityPress-200/	and Internet	DIII
4. Lata Lea	a, Pusnp & Kumar, San rning Pyt Ltd -2011	ay .Communicate or Collapse : A Handbook of Effective Public Speaking, Group Discussions	and intervi	ews, Phi
5. Duc	ck, Steve & McMahan, Da	vid T. The Basics of Communication : A Relational Perspective, Sage Publication-2012.		
6. Lav	vs, Anne- Presentations, O	rient Black Swan-2011		
7. O'C	Connor, J. D. Better Englis	h Pronunciation, Universal Books Stall-1991		
8. And	lerson, Marilyn, Nayar, Pr	amod K. & Sen, Madhuchhanda .Critical Thinking, Academic Writing and Presentation Skills, Pea	rson-2009	
e-Lea	arning Source:			
1. <u>ht</u>	tps://www.youtube.com/w	<u>atch?v=- Ul1FBVU-g</u>		
2. <u>ht</u>	tps://www.youtube.com/w	atch?v=cAMmqOoWy2k		
3. <u>ht</u>	tps://www.youtube.com/w	atch/v=ntyUNXKpYWK		
4. <u>ht</u>	tps://www.youtube.com/w	atcn /v=4 w L9tZE12Fw		

					Co	ourse A	rticula	tion Ma	atrix: (N	lapping	of COs	with POs	and PSO	Os)			
PO-PSO	DO1	DO3	DO3	DO4	DO5	DO6	DO7	DOS	DOO	DO10	DO11	DO12	DSO1	DSO2	DSO2	DSO4	DSOS
СО	FOI	FO2	FUS	F04	FOS	100	FO/	100	F09	FOID	FOIT	FO12	1301	F302	1303	1304	1303
CO1	-	-	-	-	-	2	-	2	-	-	-	2	-	-	-	-	-
CO2	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-
CO3	-	-	-	-	-	2	-	1	-	1	-	2	-	-	-	-	-
CO4	-	-	-	-	-	2	2	-	-	-	-	2	-	-	-	-	-
CO5	-	-	-	-	-	2	1	1	-	-	1	2	-	-	-	1	1

Course Code	Course Title		Attributes S									
LN202	ADVANCE PROFESSIONAL	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.			
	COMMUNICATION			4					3,4, 11			



Effective from Session: 2022-23											
Course Code	PT113	Title of the Course	HUMAN ANATOMY-II LAB	L	Т	Р	С				
Year	Ι	Semester	Π	0	0	2	1				
Pre-Requisite	NIL	Co-requisite	Nil								
Course Objectives	The student will be	he student will be able to demonstrate knowledge in human anatomy as needed for the study and practice of physiotherapy.									

	Course Outcomes							
CO1	To understand about the structure of thoracic wall& its application in practice of physiotherapy.							
CO2	To understand about the Viscera of thoracic cavity& its application in practice of physiotherapy.							
CO3	To understand about the Abdomen and Pelvis& its application in practice of physiotherapy.							
CO4	To understand about the Head and Neck & its application in practice of physiotherapy.							
CO5	To understand about the Neuro Anatomy and its application in practice of physiotherapy.							

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
		1. Practical demonstration of skeleton of thoracic wall		
1	THORACIC WALL	2. Practical demonstration of movement of thoracic wall	4	CO1
		3. Practical demonstration of surface land marks of thoracic wall		
	VISCERA OF	1. Practical demonstration of surface anatomy of lung and heart		
2	THORACIC	2. Auscultatory land marks for heart and lungs	4	CO2
	CAVITY	3. Surface land marks and functional demonstration of diaphragm		
	ADDOMEN (	1. Functional demonstration of abdominal muscle		
2	ABDOMEN &	2. Practical demonstration of region of abdomen	4	CO3
3	FELVIS	3. Practical demonstration of pelvic floor muscle	4	005
		4. Surface and palpatory landmarks for pelvis		
		1. Functional demonstration of muscles responsible for facial expression		
		2. Palpation of muscle responsible for facial expression		
		3. Functional demonstration of muscles of mastication		
4	HEAD AND NECK	4. Palpation of muscles of mastication	4	CO4
		5. Functional demonstration and palpation of cervical muscles		
		6. Demonstration of movement and palpatory structure of TMJ and atlantoaxial,		
		Atlantooccipital joint.		
5	NEURO-	1. Functional demonstration of CNS.	4	C05
5	ANATOMY	2. Functional demonstration of cranial and spinal nerve.	4	005
Referen	ce Books:			
1 E	B.D. Chaurasia's, Human	Anatomy-Volume 1, 2, 3 CBS Publishers & Distributors.		
2 I	nderbir Singh, Textbook	of Anatomy with Colour Atlas-Vol. 1, 2, 3 Jaypee Brothers.		
3 5	Anatomy by Anatomy by Anatomy by	/ regions -Lippincott.		
4 N 5 (	Sunningham Manual of P	y-Regional and applied, Churchill Livingstone.		
6 V	Villiams & Warwick, Gra	v's Anatomy-Churchill Livingstone.		
7 E	Extremities by Quining W	asb		
8 E	Basic Anatomy & Physiol	ogy by Smout and McDowell		
e-Lea	rning Source:			
1. <u>htt</u>	ps://youtu.be/X5RUF	XZZBH4		
2. <u>htt</u>	ps://youtu.be/06o_XN	KwuOE		
3. htt	ps://youtu.be/4Sab-2E	24ZDI		

					Co	urse A	rticulat	tion Ma	ntrix: (N	Mapping	g of COs	with PO	s and PS	Os)			
PO-PSO	DO1	DOJ	DO3		DO5	DOG	DO7	DOS	DOO	DO10	DO11	DO12	DSO1	DSOJ	DSO3	DSO4	DSO5
CO	FUI	FO2	FUS	F04	FUS	FU0	FO/	100	F09	FOID	FOIT	FO12	1301	F302	1303	F304	1303
CO1	1	3	1	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO2	1	3	2	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO3	1	3	1	2	-	-	-	1	1	1	-	3	2	1	1	1	1
CO4	2	3	1	2	-	-	-	1	1	1	-	3	2	2	1	1	1
CO5	1	3	1	2	-	-	-	1	1	1	-	3	2	1	1	1	1

Course Code	Course Title			Att	ributes				SDGs
PT113	HUMAN ANATOMY-	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.
	II LAD	1	1	1	1		1	1	3,4



Effective from Session	<b>:</b> 2022-23											
Course Code	PT114	Title of the Course	HUMAN PHYSIOLOGY-II LAB	L	Т	Р	С					
Year	Ι	Semester	П	0	0	2	1					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	The student will be	he student will be able to demonstrate knowledge in human physiology as needed for the study and practice of physiotherapy.										

	Course Outcomes									
CO1	To understand about excretory function & its application in practice of physiotherapy.									
CO2	To understand about gastro intestinal tract& its application in practice of physiotherapy.									
CO3	To understand about Nervous system and special senses its application in practice of physiotherapy.									
CO4	To understand about Endocrine system & its application in practice of physiotherapy.									
CO5	To understand about reproductive system and its application in practice of physiotherapy.									

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO						
1	EXCRETORY FUNCTION	Practical demonstration of excretory function on models, charts and videos	4	CO1						
2	GASTRO INTESTINALTRACT(GIT)	Practical demonstration of gastro intestinal tract on models, charts and videos	4	CO2						
3	NERVOUS SYSTEM &SPECIALSENSES	<ol> <li>Practical demonstration of nervous system and special senses on models, charts and videos</li> <li>Practical demonstration of sensory and motor function on models, charts and videos</li> <li>Practical demonstration of posture and equilibrium</li> </ol>	4	CO3						
4	4 ENDOCRINESYSTEM Practical demonstration of endocrine system on models, charts and videos									
5	5 REPRODUCTIVESYSTEM Practical demonstration of reproductive system on models, charts and videos									
Referen	ce Books:		L							
1. Cor	ncise Medical Physiology by Chau	udhuri, 4th Edition; New Central Book Agency.								
2. Hu	man Physiology, Sembulingam; 4	th ed, Jaypee Brothers.								
3. A T	Textbook of Practical Physiology,	Ghai C L, Jaypee Brothers.								
4. Pra	ctical physiology by Vijaya Joshi	; Vora Medical Publication.								
5. Hu	man Physiology, Chatterjee. Vol:	1&2; 10th Edition; Medical & Allied Agency								
6. Tex	tbook of Medical Physiology by	Guyton & Hall, 11th Edition; Elsevier Publication								
7. San	nson Wright's Applied Physiology	y 13th ed, Keele CA, Neil E & Joels N, Oxford Medical Pub.								
8. Prir	nciples of Anatomy & Physiology	, Tortora, 8th Edition; Harper & Row Publication.								
9. Tex	tbook of Physiology : Ganong									
e-Learn	ing Source:									
1. <u>htt</u> r	os://youtu.be/_jagVY0XMVk									
2. <u>http</u>	2. <u>https://youtu.be/cXPuW6ZwcFE</u>									
3. <u>http</u>	3. <u>https://youtu.be/VAEmxt78bBI</u>									
4. <u>http</u>	os://youtu.be/vLdNX5Te1Xo									

					Co	urse A	rticulat	tion Ma	ntrix: (N	Aapping	of COs	with PO:	s and PS	Os)			
PO-PSO	PO1	PO2	PO3		PO5	PO6	PO7	DOS	POQ	<b>PO10</b>	PO11	PO12	DSO1	DSO3	DSO3	DSO/	DSO5
CO	101	102	105	104	105	100	107	100	109	1010	1011	1012	1301	1302	1305	1304	1305
CO1	1	3	1	2	-	-	-	1	2	-	-	2	2	1	-	1	1
CO2	1	3	1	3	-	-	-	1	3	-	-	3	3	2	-	1	1
CO3	1	3	1	2	-	-	-	1	2	-	-	2	3	1	-	1	1
CO4	1	3	1	2	-	-	-	1	3	-	-	3	2	1	-	1	1
CO5	1	3	1	2	-	-	-	1	2	-	-	2	2	1	-	1	1
	•				~ .												

Course Code	Course Title		Attributes SI										
PT114	HUMAN PHYSIOLOGY-II LAB	Employability	Entrepreneurship	Skill Development	Skill Gender Development Equality		Human Value	Professional Ethics	No.				
		4	4	√	√		1	1	3,4				



Effective from Sessio	n: 2022-23											
Course Code	PT115	Title of the Course	BASIC OF EXERCISE THERAPY-LAB	L	Т	Р	С					
Year	Ι	Semester	П	0	0	2	1					
Pre-Requisite	Nil	Co-requisite	Nil									
Course Objectives	The student	The student will be able to demonstrate the knowledge in basic of exercise therapy as needed for the study and										
Course Objectives	practice of physiotherapy											

	Course Outcomes: After the successful course completion, learners will develop following attributes:
CO1	To understand about Mechanical principles of exercise& its application in practice of physiotherapy.
CO2	To understand about Mechanics of movement & its application in practice of physiotherapy.
CO3	To understand about Simple Mechanics& its application in practice of physiotherapy.
CO4	To understand about Fundamental and Derived Position & its application in practice of physiotherapy.
CO5	To understand about Introduction to movements its application in practice of physiotherapy.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	MECHANICAL PRINCIPLES OF EXERCISE	<ol> <li>Practical demonstration of Force and composition of force and their alteration and application on human model</li> <li>Practical demonstration of Gravity, COG, LOG, and their alteration and application in human model</li> <li>Practical demonstration of Base of support, Equilibrium and their alteration and application in human model</li> <li>Practical demonstration of Fixation stabilization and their alteration and application in human model</li> </ol>	4	CO1
2	MECHANICS OF MOVEMENT	<ol> <li>Practical demonstration of Axis and plane and its application in human model</li> <li>Practical demonstration of Power, Work, Energy and its application in human model</li> <li>Practical demonstration of Velocity, Motion and its law its application in human model</li> <li>Practical demonstration of Momentum, Inertia, Friction and its application in human model</li> </ol>	4	CO2
3	SIMPLE MECHANICS	<ol> <li>Practical demonstration of Levers and its application in human body model</li> <li>Practical demonstration of Pulleys and its application in human body model</li> <li>Practical demonstration of Inclined Planes and its application in human body model</li> <li>Practical demonstration of Stress, Strain, Springs and its application in human model</li> </ol>	4	CO3
4	FUNDAMENTAL AND DERIVED POSITION	<ol> <li>Practical demonstration of Fundamental position on human model</li> <li>Practical demonstration of Derived position on human model</li> </ol>	4	CO4
5	INTRODUCTION TO MOVEMENTS	<ol> <li>Practical demonstration of Active range of motion, Passive range of motion on human model</li> <li>Practical demonstration of Active assisted range of motion, Resisted range of motion on human model</li> <li>Practical demonstration of Types of muscle contraction on human model</li> </ol>	4	CO5
Refere	nce Books:			
1.	Practical Exercise Th	herapy-Hollis and Cook		
2.	Principles of Exercis	e Therapy- Deena Gardiner		
3.	Joint structure and fu	Inction–Norkin		
4.	Exercise Therapy–C	arolyn Kisner		
5.	Exercise Therapy in	i the management of musculoskeletal disorders- Flona willson		
e-Lea	rning Source:			
1.	https://youtu.be/X5			
2.	https://youtu.be/060			
3.	<u>mups.//youtu.0e/458</u>			
		Commentary and the Matrice Manufacture of COM with DOM and DOM		

					Co	ourse A	rticulat	ion Ma	trix: (M	lapping o	of COs wi	ith POs a	and PSOs	)			
PO-PSO	PO1	PO2	DO3		PO5	PO6	DO7	DOS	POO	<b>PO10</b>	PO11	PO12	DSO1	DSO2	DSO3	DSO4	DSO5
СО	101	102	105	104	105	100	10/	108	109	1010	1011	1012	1301	1302	1305	1304	1305
CO1	2	3	-	2	1	-	-	-	1	1	-	1	2	1	3	2	1
CO2	1	3	-	2	-	-	-	-	1	-	-	1	2	1	3	2	1
CO3	2	3	-	2	-	-	-	-	1	1	-	1	2	1	3	2	1
CO4	1	3	-	1	-	-	-	-	1	-	-	1	2	1	3	2	1
CO5	2	3	-	1	-	-	-	-	1	-	-	1	2	1	3	2	1

			11001101									
Course Code	Course Title		Attributes									
PT115	BASIC OF EXERCISE	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	No.			
	I HEKAP I -LAB	4	4	4	1		1	4	3,4			