

Branch Name:	Bachelor of Physiotherapy
Program Code:	PT101
Course Title:	Physiotherapy in Musculoskeletal Conditions
Course Code:	2PT1010402
Pre-requisite Course:	Human Anatomy, Kinesiology, Exercise Therapy I & II, Electrotherapy, Orthopaedics (Traumatic & Non-traumatic)

COURSE OUTCOMES:

At the end of the course the candidate will be able to

1. Identify, discuss and analyze the musculoskeletal dysfunction in terms of biomechanical, kinesiological and biophysical basis and correlate the same with the provisional diagnosis, routine radiological and electro physiological investigations and arrive at appropriate physical and functional diagnosis with clinical reasoning.
2. Describe as well as acquire the skill of executing short- and long-term physiotherapy treatment by selecting appropriate modes of mobilization/ manipulation, electrotherapy, therapeutic exercise and appropriate ergonomic advise for the relief of pain, restoration / maintenance of function & / or rehabilitation for maximum functional independence in ADLs at home & workplace.
3. Understand the nature of sports injuries, able to evaluate and treat sports injuries; understand the role of physiotherapist in training and rehabilitating a sports person.
4. Prescribe appropriate walking aids, orthosis and prosthesis.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)			Credit	Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical		Theory(T)		Practical(P)		Total Marks
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
03	-	0.5	6.5	80	20	80	20	200

Subject Contents:

Sr. No.	Topic	Hours
1	Evaluation, interpretation of investigations & functional diagnosis (ICF) with appropriate clinical reasoning for planning & implementation of management techniques	02
2	Planning, Prescription & Implementation of short term & long term goals with clinical reasoning	02
3	Documentation	02
4	Different physiotherapeutic techniques for functional restoration/ maintenance and prevention of disability	03
5	Different electro therapeutic techniques for relief of acute and chronic pain, swelling, wound healing, re-education with clinical reasoning	02
6	Different physiotherapeutic techniques to improve/maintain muscle performance	05
7	Different physiotherapeutic techniques to increase joint mobility	05
8	Different physiotherapeutic strategies for correction / maintenance of good posture	05
9	Different physiotherapeutic strategies to improve efficiency and safety of gait pattern	05
10	Prescription of appropriate orthotic & prosthetic devices & fabrication of simple temporary splints.	02

11	Appropriate Home Program & Ergonomic advice for preventive measures & Functional efficiency at home & work place	03
12	Physiotherapy approach in traumatology Definition of fracture, classification of fracture, signs and symptoms of fracture, healing process of fracture, factors affecting healing, methods of reduction, complications of fracture	05
13	Physiotherapy assessment in fracture cases Principles of PT management in fractures - Guidelines for fracture treatment during period of immobilization and guidelines for treatment after immobilization period Physiotherapy assessment and management of upper limb fractures and dislocations, lower limb fractures and dislocations including pelvis and spinal fractures.	05
14	Physiotherapy assessment & management of soft tissue injury Contusion, sprains, strains, ruptures	03
15	Physiotherapy assessment & management of degenerative conditions Osteoarthritis (OA) with emphasize on Knee, Hip and Hand cervical spondylosis, lumbar spondylosis	20
16	Physiotherapy assessment & management of inflammatory conditions Rheumatoid arthritis (RA), ankylosing spondylitis (AS), Still's disease, gout, peri arthritis, bursitis, synovitis, capsulitis, tendinitis, tenosynovitis, fasciitis, Osgood Schlatter disease	05
17	Physiotherapy assessment and management of infective Conditions Tuberculosis (TB) of spine and other major joints, osteomyelitis, pyogenic arthritis, septic arthritis	03
18	Physiotherapy assessment & management of congenital and acquired deformities Congenital - CTEV, CDH, Torticollis, pesplanus, pescavus, Sprengel's scapula, Madelung's deformity Acquired: scoliosis, kyphosis, coxavara, genu varum, valgum and recurvatum, wry neck	05
19	Physiotherapy assessment & management of spinal conditions Spondylolisthesis, Spinal canal stenosis, Spondylolysis, Intervertebral disc prolapse, Sacro-iliac joint dysfunction, Coccydynia Sacralisation, Lumbarisation, Spina bifida occulta	10
20	Physiotherapy assessment & management of amputations Definition, indications, types, levels of amputation of lower and upper extremities, pre and post operative assessment and management with emphasize on stump care and bandaging, pre and post prosthetic training and complete rehabilitation	10
21	Rehabilitation of patient with orthopedic surgery Pre and post operative management of arthroplasty of all major joints, girdle stonearthroplasty, arthrodesis, arthroscopy, oosteotomy Reattachment of limb	10
22	Physiotherapy assessment & management of re-constructive surgery Cerebral Palsy, poliomyelitis, leprosy	03
23	Physiotherapy assessment & management of hand injury	05
24	Physiotherapy assessment & management of metabolic and hormonal disorders of the bone tissue a) Osteoporosis, rickets, osteomalacia	01
25	Physiotherapy assessment & management of miscellaneous orthopedic conditions a) Mallet finger b) Trigger finger c) Dequerian's disease d) Metatarsalgia e) hallux valgus f) Dupuytren's contracture	02

	g) Thoracic outlet syndrome h) Chondromalacia patellae i) Ganglion j) Tennis elbow k) Plantar fasciitis	
26	Sports Medicine a) Introduction & classification of sports injury b) Aetiological factors c) Prevention of sports injury d) Frequency and site of injury e) Investigation and assessment in sports injury	07
27	Management of sports injuries a) Pharmacology in sports b) Rehabilitation in sports	03

Text Books:

1. Jayantjoshi, Prakash P Kotwal - Essentials of Orthopaedics & Applied Physiotherapy- 4th edition.
2. Essentials of Orthopedics for Physiotherapists John Ebnezer- 2nd Edition.
3. Essentials Orthopaedics, Maheshwari & Mhaskar -5th Edition.

Reference Books:

1. Apey's system of Orthopaedics and Fractures, Solomon, Louis- 9th Edition.
2. Orthopedic Physical Assessment, Magee, David-7th Edition.
3. Rheumatological Physiotherapy, David, Carol – 1st Edition.
4. A Practical Guide on Physiotherapy Assessment for Physiotherapy Students, Nambi, Gopal S.- 1st Edition.

List of Open Source Software/learning website:

- k-hub.in e library|A single platform for all e resources (K-hub, E Resource)
 - User Name- KB4605VNG
 - Password- BL@69BX!
- knowledgegainer.delnet.in (Delnet, E Resource)
 - User Name-gjspum
 - Password- spu10924

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Identify, discuss and analyze the musculoskeletal dysfunction and correlate with the provisional diagnosis, routine radiological and electro physiological investigations and conclude appropriate physical and functional diagnosis with clinical reasoning.	1 Remembering 2 Understanding 3 Analyze 4 Applying 5 Evaluate
CLO2	Describe as well as acquire the skill of executing short and long term physiotherapy treatment by selecting appropriate modes of mobilization/ manipulation, electrotherapy, therapeutic exercise and appropriate ergonomic advice for the relief of pain, restoration / maintenance of function & / or rehabilitation for maximum functional independence in ADLs at home & workplace.	1 Remembering 2 Understanding 3 Analyze 4 Applying 5 Evaluate

CLO3	Understand the nature of sports injuries, able to evaluate and treat sports injuries & understand the role of physiotherapist in training and rehabilitating a sports person.	1 Remembering 2 Understanding 3 Analyze 4 Applying 5 Evaluate
CLO4	Learn basic techniques to identify and diagnose basic disease along with Postoperative Physiotherapy management.	2 Understanding 3 Applying 4 Evaluate
CLO5	Learn the skilled motion and evaluate abnormality associated with them, identify and compare the various techniques to treat that condition.	3 Analyze 4 Applying 5 Evaluate
CLO6	Prescribe appropriate walking aids, orthosis and prosthesis.	2 Understanding 3 Applying 4 Evaluate

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)								Program Specific Outcomes (PSOs)							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CLO1	H				M				M							
CLO2		M		M			M			H				M		M
CLO3			H			M					H	M				
CLO4				L					M				M			
CLO5	M				M		M			M				M	M	
CLO6						M		L					M		L	M

H:High, M:Medium, L:Low