

COURSE	FACULTY OF PHYSIOTHERAPY
PROGRAM	BACHELOR OF PHYSIOTHERAPY
YEAR	4
COURSE TITLE	PHYSIOTHERAPY IN COMMUNITY HEALTH AND BIO-ENGINEERING
COURSE CODE	17PT0404
COURSE CREDITS	2

Pre-requisite of course: Should have basic idea about orthopaedic, neurological and other conditions/Diseases.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
40	0	20	25	15	10	25	25

Contents : Unit	Topics	Contact Hours
1	Concepts of community health Preventive, Promotive, restorative and rehabilitative, WHO definition of health and disease,, Health delivery system - 3 tier	3
2	Disability types Physical & Psychological Evaluation, prevention & Legislation related to Persons with Disability (PWD)	3
3	CBR Definition, principles, types (institutional, reach out and community), concepts, WHO policies, Principles of Team work of medical practitioner, Physiotherapist, Occupational Therapist, Speech & Audiology Therapist, Prosthetist & Orthotist, Clinical psychologist, vocational counsellor and social worker Role of Physiotherapy in team, concept of multipurpose health worker, role of Physiotherapy and strategies in 3 tier Health delivery system, communication strategies	4
4	Health Care Prevention, Promotion & Restoration 1. In peri pubertal age group 2. In women-pregnancy, menopause 3. In Geriatrics- neuromusculoskeletal, cardiovascular, pulmonary, metabolic and degenerative conditions 4. In Obese / overweight 5. In Cardiovascular and Pulmonary conditions 6. In Diabetes 7. Health promotion for all	3
5	Women and child care 1. Antenatal exercises, Specific Breathing exercises, Relaxation, Postural training, Pelvic floor strengthening exercises with clinical reasoning 2. Physiotherapy during labor 3. . Postnatal exercises program after normal labor / labor with invasive procedures with clinical reasoning 4. Menopause - Osteoporosis, Mental health,	3

	Physiotherapy management 5. Preterm babies 6. Adolescent age group 7. Nutritional disorders in women and children	
6	Geriatrics Physiology of aging, environmental changes and adaptations, balance and falls Role of Physiotherapy in geriatric population	2
7	Industrial health (Ergonomics) A) Ability Management Job analysis - Job description, ergonomic evaluation, injury prevention, B) Environmental stress in the industrial area 1. Physical agents e.g. heat / cold, light, noise, vibration, UV radiation, ionizing radiation 2. Chemical agents- inhalation, local action and ingestion 3. Mechanical hazards- overuse/fatigue injuries due to ergonomic alternation and mechanical stresses, C) Mechanical stresses in various job-related postures and activities , D) Psychological health	2
8	Introduction and terminology: prosthesis and orthosis Introduction and terminology: prosthesis and orthosis	1
9	Classification of orthosis and prostheses Classification of orthosis and prostheses	2
10	Bio-mechanical principles of orthotic application Bio-mechanical principles of orthotic application	1
11	Bio-mechanical principles of prosthetic application. Bio-mechanical principles of prosthetic application.	1
12	Orthotic appliances for Hip, Knee, Ankle& foot - Prescription and design & modification Orthotic appliances for Hip, Knee, Ankle& foot - Prescription and design & modification	1
13	Spinal conditions inclusive of fractures, spondylolisthesis, kyphosis, scoliosis etc. Spinal conditions inclusive of fractures, spondylolisthesis, kyphosis, scoliosis etc.	2
14	Upper limb conditions – splinting prescriptions with principles. Upper limb conditions – splinting prescriptions with principles.	3
15	Upper & lower limb; endo skeletal & exo skeletal Prosthesis – Upper & lower limb; endo skeletal & exo skeletal, b. Hip, knee & foot prosthetic components with k-levels, Upper limbs: cosmetic restoration, terminal devices (body powered), self-help devices (ADL equipment), myoelectric, microprocessor / sensor controlled (externally powered) d. Adaptive devices	4
16	Psychological & Physiological aspects of orthotic and prosthetic application. Psychological & Physiological aspects of orthotic and prosthetic application	2
17	Material used in fabrication of Prosthetics & Orthotics briefly. Material used in fabrication of Prosthetics & Orthotics briefly	1
18	Mobility aids Canes, crutches, walking frames, walkers, wheel chairs manual / electrically powered.	2
Total Hours		40

Textbook :

- 1 Textbook of Rehabilitation, S. Sunder , JPB, 2010
- 2 Textbook of preventive and social medicine, Park & Park, Banarsidas Bhanot Publishers, 2021
- 3 Short Textbook of Prosthetics and Orthotics, R Chinna Thurai, Jaypee Brothers Medical Publishers Private Limited, 2010
- 4 Physical Rehabilitation, Susan B O'Sullivan, Jaypee medical, 2013

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation

Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
20.00	20.00	30.00	10.00	10.00	10.00