

UNIVERSITY OF ENGINEERING AND MANAGEMENT		
LECTURE WISE PLAN		
Subject Name: PT in Orthopedic conditions		Subject Code – PTO401
Year - Fourth Year		
S. No.	Topics	Hours
	Unit I (INRODUCTION)	15 H
1.	Brief review of the orthopedic conditions and various physiotherapeutic modalities, aim, means and techniques of physiotherapy should be taught	10H
	Detailed Orthopedic assessment Performa	5H
	Unit II (DISLOCATION)	85 H
	Classifications, Type of displacement, Methods of immobilization.	5H
	Healing of fractures, Factors influencing union, non-union, delayed union etc.	7H
	Specific fracture of U/L & L/L bones and their complete physiotherapeutic management	7H
	Physiotherapy management of fracture of spine with paraplegia and without neurodeficit	5H
	Physiotherapy in relation to soft tissue injuries, Upper extremity, Lower extremity, Spine- Cervical, Thoracic & Lumbar.	10H
2.	Physiotherapy in relation to amputation (Definition, levels, indications, types, PT assessment, aims, management pre and post operatively PT management with emphasis on stump care and bandaging)	5H
	Physiotherapy in relation to various deformities eg. CTEV, Pesplanus, Pescavus etc	8H
	Physiotherapy in various acquired & congenital spinal deformities	8H
	Physiotherapy in peripheral nerve injury, plexus injury etc	6H
	Physiotherapy in relation to arthritis	7H
	Fracture cast, Bracing, Mobilization	5H
	Physiotherapy in relation to arthroplasty& osteotomy	7H
	Physiotherapy in relation to tendon transfer	5H

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LECTURE WISE PLAN

Subject Name: P.T. IN MEDICAL CONDITIONS INCLUDING PEDIATRICS Subject code- PTM401

UNIT No.	Topics	Hours
1.	Unit I GENERAL MEDICINE	20H
	Introduction: Brief review of the following medical condition and various modalities of physiotherapy, aims, mean and techniques of physiotherapy should be taught.	1H
	Edema- classification and management	2H
	Skin Conditions - Acne, psoriasis, alopecia, leukoderma, leprosy, STDs	6H
	Deficiency disease- Rickets, Vitamin Deficiency Syndrome, osteoporosis, osteomalacia etc.	2H
	Obesity	2H
	Non-articular rheumatism	3H
	Connective tissue disorders	4H
2.	Unit II RESPIRATORY	20H
	Review of mechanism of normal respiration	1H
	Chest examination including auscultation.	1H
	Pulmonary function testing	3H
	Physiotherapy management of COPD, asthma, lung abscess, bronchiectasis, emphysema etc. Paralysis of diaphragm and vocal cords Pleurisy, empyema, pneumonia etc. Chest deformities Bacterial diseases	15H
3.	Unit III CARDIO-VASCULAR	20H
	Congestive Heart Failure	5H
	Myocardial Infraction	5H
	Peripheral vascular diseases	4H
	Gangrene	3H
	DVT	3H
4.	Unit IV PAEDIATRICS	15H
	Common congenital and acquired musculoskeletal, neurological, hereditary, metabolic disorders	15H
5.	Unit V PSYCHIATRIC DISORDERS	10H
	Senile dementia	4H
	Psychosis	3H
	Psycho-neurosis	3H
6.	Unit VI GERIATRICS	15H
	Identification, assessment and management of geriatric musculoskeletal, cardio- pulmonary, neurological, somato-sensory; injuries and accidents specifically to aged.	5*3H

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LECTURE WISE PLAN

Subject Name: P.T. in Neurological and Neurosurgical conditions

Subject code- PTN401

UNIT No.	Topics	Hours
1.	Unit I	5H
	Review the basic anatomy of the brain and spinal cord including: Blood supply of the brain and spinal cord, anatomy of the visual pathway, connections of the cerebellum and extra-pyramidal system	3H
	Relationship of the spinal cord segments, long tracts of the spinal cord, the brachial and lumbar plexuses and cranial nerves.	2H
2.	Unit II	5H
	Review in brief the Neurophysiological basis of: tone and disorders of tone and posture, bladder control, muscle contraction and movement and pain.	5H
3.	Unit III	30H
	Hydrocephalus	3H
	Spina Bifida	2H
	Cranio-vertebral junction anomalies	4H
	Arnold Chiari malformation, Dandy Walker Syndrome etc.	4H
	Cerebrovascular accidents	6H
	Head injury	6H
	Spinal cord injury	5H
4.	Unit IV	25H
	Syringomyelia	1H
	Tumors	3H
	Spinal arachnoiditis	1H
	Transverse myelitis	2H
	T.B. Spine	2H
	Multiple sclerosis	2H
	Parkinson's disease	3H
	Dementia	1H
	Meningitis and encephalitis	3H
	Tuberculosis infection of central nervous system.	2H
	Poliomyelitis	2H
	Brain abscess	1H
	Tabes Dorsalis	1H
Acute disseminated encephalomyelitis	1H	
5.	Unit V	25H
	Myopathies	3H
	Epilepsy	3H
	Myasthenia Gravis	2H
	Intracranial tumors	4H
	Motor neuron disease	2H
	Extra pyramidal tract lesions	1H
	Ataxia	1H
	Polyneuropathy	2H
	Bells Palsy, facial palsy and Trigeminal Neuralgia	3H
	Disc Prolapse	2H
	Herniation of Brain	2H

	Cerebral Palsy	3H
6.	Unit VI	10H
	Approaches applied in management of neurological conditions	5H
	Bobath, Brunnstorm, Roods, PNF	5H

UNIVERSITY OF ENGINEERING & MANAGEMENT**LECTURE WISE PLAN****Subject Name: P.T. IN SURGICAL CONDITIONS (Theory)****Subject Code – PTS401****Year - Fourth Year****Total- 100 Hours**

S. No.	Topics	Hours
Unit 1	Brief review of the following surgical conditions and various physiotherapeutic modalities, aims, means and techniques of physiotherapy should be taught.	10 H
Unit 2	Postural drainage & respiratory physiotherapy in CVTS including principles of cardiac rehabilitation.	10 H
Unit 3	Physiotherapy in patients on ventilators	10 H
Unit 4	Pre- and Post-Operative physiotherapy management of following conditions. a. Thoracotomy b. Lobectomy c. Thoracoplasty d. Pneumonectomy e. Decortication f. Herniorrhaphy g. Nephrectomy h. Radical Mastectomy i. Abdominal Surgeries	15 H
Unit 5	Orientation about atelectasis, pneumothorax & other Post-operative Complications.	10 H
Unit 6	Pre- and post-operative physiotherapy management of pediatric and adult cardiac surgery including vascular surgery	10 H
Unit 7	Burn & its classification Physiotherapy management.	2 H
Unit 8	Pre and Postoperative Physiotherapy of skin grafting	5 H
Unit 9	Physiotherapy of cases after Reconstructive surgery of hand	5 H
Unit 10	Physiotherapy in obstetrics	10 H
Unit 11	Physiotherapy in PID, stress incontinence, prolapse uterus, etc.	10 H
Unit 12	PT in Wound management	3 H

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LECTURE WISE PLAN		
Subject Name: CLINICAL REHABILITATION –II		Subject Code – CLR401
Year – Final Year		
S. No.	Topics	Hours
1.	Unit I	40H
	Prosthesis and Orthosis	
	Definition and Basic Principles.	6H
	Designing and Construction of Upper & Lower extremity Orthosis & Spinal Orthosis.	8H
	Prescription and design of footwear and its modification.	6H
	Wheelchairs.	5H
	Ambulatory Aids & Assistive Devices.	6H
	Measurement and P.O.P cast techniques.	5H
	Low-cost thermo-labile material for construction of Orthosis.	4H
2.	Unit II	40 H
	Ethics	
	The implications and confirmation to the roles of professional conduct.	10H
	Legal responsibility for their actions in the professional context and understanding liability and obligations in case of medico legal action.	15H
	A wider knowledge of ethics relating to current social and medical policy in the provision of health care.	15H
3.	Unit: III	20H
	Functional Outcome Measures	
	Functional Assessment scales & its clinical uses e.g. functional independent measure, Sylvain index, PEDI, Gross Motor Function, etc.	20H

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LECTURE WISE PLAN

Subject Name: EXERCISE PHYSIOLOGY and SPORTS PHYSIOTHERAPY

Subject Code – ESP401

Year - Final Year

Total- 100H

S. No.	Topics	Hours
	Unit I	30 H
	Pre-exercise evaluation.	2H
	Diet and nutrition.	2H
1.	Measurement of fitness components and sport skills. Measurement of muscular strength. Measurement of muscular endurance. Measurement of flexibility. Determination exercise endurance.	12H
	Physiological effects of exercise on body systems. Muscular System Endocrine system Cardio-respiratory system Nervous system	14H
	Unit II	35 H
	Sport injuries	
	Spine – PIVD, kissing spine, cervical whiplash injuries, facet joint syndrome, SI joint dysfunction.	6H
2.	Hip – muscle strain, piriformis syndrome, ITB syndrome, ostitis pubis.	6H
	Knee – menisci, cruciate, collateral, osteochondritis, chondromalacia	6H
	Patellae, biceps femoris tendonitis, swimmers’ knee, patella-femoral pain syndrome	6H
	Leg & ankle – shin splint, Achilles tendonitis & rupture, TA bursitis, ankle sprain, plantar fasciitis, turf toe syndrome.	6H
	Head & face – maxilla-facial injuries, helmet compression syndrome.	5H
	Unit: III	35H
3.	Sport Injuries Shoulder – instability, rotator cuff injury, biceps tendonitis and rupture, pectorals major rupture, scapular dyskinesis and acromio-clavicular joint injuries.	8H

Elbow – tennis elbow, golfer’s elbow.	4H
Wrist and hand – carpal tunnel syndrome, gamekeepers’ thumb.	5H
Principles of injury prevention.	5H
Principles of training & Rehabilitation in sports injuries.	5H
Sports in special age group: Female athletic triad.	2H
Younger athlete – Musculo- skeletal problems, management, children with chronic illness and nutrition.	4H
Older athlete- Physiological changes with aging, benefits, risks of exercise in elderly, exercise prescription guidelines for elderly.	2H