

MUSCULOSKELETAL PHYSIOTHERAPY

Sr. No.	Topics	Didactic Hours	Clinical Hours
1.	Use of ICF model in physiotherapy management of health condition of musculoskeletal system	02	00
2.	Outcome measures – and Evidence Based Practice	02	00
3.	Biomechanical / Physiological basis of physiotherapy intervention skills	04	05
4.	Physiotherapy interventions with goal setting for dysfunctions due to musculoskeletal health conditions secondary to conservative or surgical management of:		
	Manifestations of trauma and their complications	22	50
	Degenerative Arthritis	07	45
	Inflammatory conditions	04	05
	Infectious Diseases of bones & joints	02	05
	Metabolic & Hormonal Disorders	02	05
	Congenital & Acquired Deformities	06	10
	Peripheral Nerve Injuries & Plexus Injuries	03	05
	Tumours of bone, Vascular disorders and Traumatic Amputations	06	10
TOTAL		60	140

Month & Week	TOPICS	Didactic Hours	Practical Hours	Total Hours
FEBRUARY	CLINICAL POSTING			
MARCH WEEK 1	<p>Use of ICF model (Bio, Psycho and Social) to plan Short term and Long term goals in physiotherapy management of health condition of musculoskeletal system</p> <p>a. Identification of short term and long term goals based on</p> <p>i) Capacity and Performance related to activities and participation to enhance functioning</p> <p>ii) Personal and Environment factors -facilitators and barriers that affect disablement and functioning</p> <p>b. Documentation of disability and functioning</p> <p>c. Red flags- Recognizing signs and symptom</p>	02	-	02
MARCH WEEK 1	<p>a. Introduction to functional scales as outcome measures – Generic and Disease specific.</p> <p>b. Evidence base practice in musculoskeletal health conditions- levels of evidence, clinical application</p>	01	-	01
MARCH WEEK 1	<p>Biomechanical / Physiological basis of following modes physiotherapy interventions implemented during all three stages of tissue healing -</p> <p>a. Electrotherapeutic modes for pain- acute and chronic pain syndromes, swelling, wound healing, re- education</p> <p>b. Therapeutic exercise to alleviate pain, increase mobility, muscle performance (strength) endurance, motor control, muscle length, posture and gait training</p>	01	00	01
WEEK 2	<p>c. Therapeutic exercise to alleviate pain, increase mobility, muscle performance (strength) endurance, motor control, muscle length, posture and gait training</p>	01	00	01

	<ul style="list-style-type: none"> c. Taping techniques for pain relief , support and posture correction <ul style="list-style-type: none"> i. Principles ii. Indications / Contraindications iii. Types of tapes and terminologies used iv. Techniques 	01	04	05
Month & Week	Physiotherapy interventions with goal setting for dysfunctions due to musculoskeletal health conditions secondary to conservative or surgical management of:			
MARCH	Topics	Didactic Hours	Clinical/ Pract Hrs	Total hours
	1. Manifestations of trauma and their complications:	16	20	36
WEEK 3	a. Bones – fractures & fracture-dislocations of extremities & spine and their complications & management	03	03	
WEEK 4	a. Bones – fractures & fracture-dislocations of extremities & spine and their complications & management	03	03	
APRIL WEEK 1	a. Bones – fractures & fracture-dislocations of extremities & spine and their complications & management	02	04	
WEEK 2	b. Soft tissues injuries of extremities & spine and their complications & Management, contused lacerated wounds (CLWs) Burns complications and management, Crush injuries and its conservative and post surgical management.	03	03	
WEEK 3	b. Soft tissues injuries of extremities & spine and their complications & Management, contused lacerated wounds (CLWs) Burns complications and management, Crush injuries and its conservative and post surgical management.	03	03	
WEEK 4	b. Soft tissues injuries of extremities & spine and their complications & Management, contused lacerated wounds (CLWs) Burns complications and management, Crush injuries and its conservative and post surgical management.	02	04	
MAY WEEK 1	Degenerative Arthritis <ul style="list-style-type: none"> a. Osteoarthritis of knee b. Peri-arthritis of shoulder c. Spinal degenerative conditions like Sponylosis, Spondylsysis, Spondylolisthesis, and Spinal Canal Stenosis 	02	04	

WEEK 2	Degenerative Arthritis a. Osteoarthritis of knee b. Peri-arthritis of shoulder c. Spinal degenerative conditions like Spondylosis, Spondylolysis, Spondylolisthesis, and Spinal Canal Stenosis	02	04	
WEEK 3				
WEEK 4	SUMMER VACATION			
JUNE WEEK 1	MIDTERM EXAMINATION			
WEEK 2	Degenerative Arthritis a. Osteoarthritis of knee b. Peri-arthritis of shoulder c. Spinal degenerative conditions like Spondylosis, Spondylolysis, Spondylolisthesis, and Spinal Canal Stenosis	02	04	
WEEK 3	Degenerative Arthritis • Osteoarthritis of knee • Peri-arthritis of shoulder • Spinal degenerative conditions like Spondylosis, Spondylolysis, Spondylolisthesis, and Spinal Canal Stenosis	01	05	
WEEK 4	Degenerative Arthritis • Osteoarthritis of knee • Peri-arthritis of shoulder • Spinal degenerative conditions like Spondylosis, Spondylolysis, Spondylolisthesis, and Spinal Canal Stenosis	00	06	
JULY WEEK 1	3. Inflammatory conditions a. Rheumatoid, Gouty, Septic arthritis b. Spondylo-arthropathies e.g. Ankylosing Spondylitis. c. Cellulites and its complications. d. Post incisional inflammation and infection. e. Myositis ossificans and traumatica. f. Avascular necrosis	04	02	06
WEEK 2	4. Infectious Diseases of bones & joints of extremities & spine a. Tuberculosis b. Osteomyelitis	02	04	06
WEEK 3	5. Metabolic & Hormonal Disorders a. Osteoporosis b. Osteomalacia	02	04	06
WEEK 4	6. Congenital & Acquired Deformities of extremities & spine a. CTEV b. DDH b. Kyphosis d. Scoliosis e. Genu valgus / varus f. Cubitus varus / valgus g. Coxa vara / valga etc. h. Deformities of the foot	03	03	06

NEUROPHYSIOTHERAPY

(Didactic 60 hrs + Clinical 140 hrs) TOTAL 200 HRS

Sr. No.	Topics	Didactic Hours	Practical Hours	Total Hours
1.	APPLICATION OF ICF MODEL	02		002
2.	THEORETICAL BASIS OF MOTOR CONTROL AND LEARNING	02		002
3.	ADAPTIVE SYSTEM : PLASTICITY AND RECOVERY	01		001
	GENERAL METHODS OF STRENGTH TRAINING, FITNESS AND PROMOTION OF SKILL ACQUISITION	04		004
4.	QUALITY OF LIFE SCALES AND INDEPENDENCE MEASURE	02		002
5.	PHYSIOTHERAPY MANAGEMENT			
	A. ADULT	37	095	132
	B. PAEDIATRIC	17	040	057
	TOTAL	65	135	200

Month & Week	Topics	Didactic Hours	Practical Hours	Total Hours
FEBRUARY	CLINICAL POSTING			
MARCH WEEK 1	<p>Features of ICF model (bio, psycho and social) to plan efficient, effective and cost-contained short term and long term goals to enhance functioning in a patient with health condition of nervous system.</p> <ol style="list-style-type: none"> Clinical utility of bi-directional relationships among the ICF model's domain Environment and Personal factors- Facilitators and Barriers that affect disablement and functioning Capacity and Performance related Activities and Participation to enhance Functioning Set patient specific goals and expected outcome with clinical reasoning Documentation of disability and functioning Red flags-recognizing signs and symptoms 	02	--	02
	Theoretical basis of motor control and learning to understand various neurophysiotherapeutic approaches.	02	--	02
	a. Strength training and physical conditioning in neuro rehabilitation to optimize functional performance	02	--	02
MARCH WEEK 2	<ol style="list-style-type: none"> Skill acquisition in restoration of functional performance <ul style="list-style-type: none"> information, instruction, demonstration feedback practice 	02		02

	c. Plasticity of the intact brain <ul style="list-style-type: none"> • motor learning • training • plasticity Plasticity following brain lesion <ul style="list-style-type: none"> • nature of spontaneous recovery • effect of environment behavior and recovery • adaptation of motor performance • muscle adaptation 	01	--	01
	Quality of Life scales & Independence Measures	02	--	02
	Psychosomatic pain & paralysis	01		01
MARCH	PHYSIOTHERAPY MANAGEMENT			
	Topic	Didactic Hours	Practical / Lab Hours	Total Hours
WEEK 3	a. Stroke – cerebral circulation, types of stroke and manifestations, assessment and management	02	04	06
WEEK 4	a. Stroke – cerebral circulation, types of stroke and manifestations, assessment and management	03	03	06
APRIL WEEK 1	a. Stroke – cerebral circulation, types of stroke and manifestations, assessment and management	03	03	06
APRIL WEEK 2	b. Acquired brain injury; trauma and pathology (S.O.L.)	03	03	06
APRIL WEEK 3	c. Spinal cord disorders – traumatic and non – traumatic, management including bladder training	02	04	06
APRIL WEEK 4	c. Spinal cord disorders – traumatic and non – traumatic, management including bladder training	02	04	06
MAY WEEK 1	Cerebral palsy -etiology and type -assessment	04	02	06
MAY WEEK 2	Cerebral palsy -differential diagnosis -management	04	02	06

MAY WEEK 3	SUMMER VACATION			
MAY WEEK 4				
JUNE WEEK 1	MIDTERM EXAMINATION			
JUNE WEEK 2	d. Peripheral neuropathies – traumatic & non traumatic - upper limb & lower limb - brachial plexus - nerve root lesions metabolic & endocrine	03	03	06
JUNE WEEK 3	d. Peripheral neuropathies – traumatic & non traumatic - upper limb & lower limb - brachial plexus - nerve root lesions metabolic & endocrine	03	03	06
JUNE WEEK 4	e. Vestibular disorders – central and peripheral	02	01	03
	f. VII th cranial nerve	01	02	03
JULY WEEK 1	g. Demyelinating diseases - Multiple Sclerosis & G.B. syndrome	02	04	06
JULY WEEK 2	h. Cerebellar diseases and Ataxia	02	04	06
JULY WEEK 3	i. Extrapyramidal diseases, with emphasis on Parkinson's disease	03	03	06
JULY WEEK 4	j. Anterior Horn Cell diseases – heredity and acquired e.g. M.N.D., P.M.A., S.M.A., Poliomyelitis	02	04	06
AUGUST WEEK 1	k. Myopathies	01	05	06
AUGUST WEEK 2	k. Myopathies	01	05	06

AUGUST WEEK 3	Disorders of A.N.S. – Horner’s syndrome, Hypo/Hypertension, Autonomic Dysreflexia	01	05	06
AUGUST WEEK 4	Down’s syndrome	01	05	06
SEPTEMBER WEEK 1	Neural tube defects: Spina Bifida and Hydrocephalus	01	05	06
SEPTEMBER WEEK 2	Neural tube defects: Spina Bifida and Hydrocephalus	01	05	06
SEPTEMBER WEEK 3	Brachial plexus injuries	01	02	03
	Infectious disorders	01	01	02
	Psychosomatic pain & paralysis		01	01
SEPTEMBER WEEK 4	Post Poliomyelitis Residual Paralysis	01	01	02
	S.M.A. / H.S.M.N.	01	01	02
	Psychosomatic pain & paralysis	00	02	02
OCTOBER WEEK 1	D.M.D. & other Myopathies	01	05	06
OCTOBER WEEK 2	Pediatric extra pyramidal disorders	01	05	06
OCTOBER	i. Extrapyramidal diseases, with emphasis on Parkinson’s disease	00	06	06

WEEK 3				
OCTOBER WEEK 4	h. Cerebellar diseases and Ataxia	00	06	06
NOVEMBER WEEK 1	DIWALI VACATION			
NOVEMBER WEEK 2	PREFINAL EXAMINATION			
NOVEMBER WEEK 3 WEEK 4	PREPARATORY LEAVE			
DECEMBER	UNIVERSITY EXAMINATION			

CARDIOVASCULAR & RESPIRATORY PHYSIOTHERAPY

Sr. No.	Topics	Didactic Hours	Practical/Lab Hours	Total Hours
1	REVIEW OF BASIC APPLIED ANATOMY & PHYSIOLOGY	3		3
2	INVESTIGATION AND EXERCISE TESTING	4	10	14
3	EXERCISE PHYSIOLOGY	5	10	15
4	PHYSIOTHERAPY SKILLS	8	34	42
5	APPLICATION OF ICF MODEL	2		2
6	PHYSIOTHERAPY MANAGEMENT	20	53	73
7	CARDIAC REHABILITATION	4	10	14
8	PULMONARY REHABILITATION	2	5	7
9	ICU EVALUATION & MANAGEMENT	8	12	20
10	INTRODUCTION TO FUNCTIONAL SCALES	2	1	3
11	BASIC LIFE SUPPORT (C.P.C.R.)	2	5	7
	TOTAL	60	140	200

Month	Topics	Theory Hrs	Practical Hrs	Total
<u>February</u>	CLINICAL POSTING			
<u>March</u>				
Week 1	BASIC APPLIED ANATOMY & PHYSIOLOGY a. Pulmonary Anatomy & Physiology b. Cardiac anatomy & Physiology c. Cardiac and Respiratory Pharmacology Biomechanics of Thorax (Revision)	03	-	03
	Introduction to Functional Scales - Generic and disease specific - Patient's perception of his disability and functioning and correlating the same with therapist evaluation	02	01	03
Week 2	INVESTIGATION AND EXERCISE TESTING Investigation & Clinical Implication - X-ray, PFT, ABG, ECG, ABI, claudication time, pulses, auscultation, postural hypotension	02	04	06
Week 3	- Stress testing i. 6 Minute Walk test & Harward Step test Skill & Interpretation Shuttle Walk Test & Modified Bruce Protocol (should be interpretation only)	02	04	06
Week 4	EXERCISE PHYSIOLOGY - Nutrition(Bioenergetics) - Total energy expenditure (MET) sources - Acute and chronic adaptation to exercise	03	03	06

APRIL				
Week 1	<ul style="list-style-type: none"> - Complication of bed rest/ Immobilization & prevention - Aerobic & Anaerobic Training - Principles of Exercise Prescription 	03	03	06
Week 2	<ul style="list-style-type: none"> - Bronchial Hygiene Therapy- Postural Drainage - Lung Expansion Therapy 	01	05	06
Week 3	<ul style="list-style-type: none"> - Forced Expiratory Technique - ACBT - Autogenic Drainage - Applied Yoga in Cardio-respiratory conditions 	01	05	06
Week 4	<ul style="list-style-type: none"> - Adjunct Therapy – Flutter & PEP Therapy - Neurophysiologic facilitation of respiration 	01	05	06
<u>MAY</u>				
Week 1	<ul style="list-style-type: none"> - Therapeutic positioning to improve ventilation & perfusion matching, - Therapeutic positioning to alleviate dyspnea - Therapeutic exercise program to strengthen respiratory muscles 	02	04	06
Week 2	<ul style="list-style-type: none"> • Nebulization & Humidification • Electrotherapeutic modalities for pain, swelling, & wound healing • Therapeutic exercise program to alleviate pain, to achieve mobility, to correct posture and improve peripheral circulation. 	02	04	06
Week 3	SUMMER VACATION			
Week 4				
<u>JUNE</u>				
Week 1	MIDTERM EXAMINATION			
Week 2	<ul style="list-style-type: none"> - Deliver Ergonomic advice - energy conservation advice - Home exercise Program - modifications of contextual factors. 	01	05	06
Week 3	Cardiac rehabilitation <ul style="list-style-type: none"> - Definition, - Indications, Contraindications 	02	04	06
Week 4	Cardiac rehabilitation <ul style="list-style-type: none"> - Phases (I,II,III,& IV) - Outcome Measures 	02	04	06

<u>JULY</u>				
Week 1	Medical & Surgical Cardiovascular Diseases <ul style="list-style-type: none"> - Hypertension - I.H.D. , Myocardial Infarction - Valvular Heart Disease - Congenital - Acquired -Thrombosis, Phlebitis and Phlebothrombosis - Varicose Veins and ulcers <ul style="list-style-type: none"> • Other Arterial disorders 	04	02	06
Week 2	Pulmonary Rehabilitation <ul style="list-style-type: none"> - Definition, - Indications - Contraindications - Components of management - Outcome measures 	03	03	06
Week 3	BASIC LIFE SUPPORT (C.P.C.R.)	02	04	06
Week 4	I.C.U. EVALUATION & MANAGEMENT – <ul style="list-style-type: none"> - Basic evaluation - Principles of ICU Monitoring - Mechanical Ventilator modes - Suctioning & Humidification Therapeutic intervention in <ul style="list-style-type: none"> - Tetanus, Head Injury - Multiple Organ Failure 			
<u>AUGUST</u>				
Week 1	<ul style="list-style-type: none"> - Neuromuscular Disease - Smoke Inhalation - Poisoning, - Aspiration near Drowning, - A.R.D.S. - Shock - Guillan Barre Syndrome - Spinal Cord Injury & Other Acute respiratory Disorders 	02	04	06
Week 2	Obstructive & Restrictive Respiratory disorders <ul style="list-style-type: none"> - Bronchitis - Emphysema - Bronchial Asthma 	02	04	06
Week 3	<ul style="list-style-type: none"> - Cystic Fibrosis - Occupational lung diseases - Interstitial Lung Diseases 	02	04	06

Week 4	General Respiratory Infection <ul style="list-style-type: none"> - Tuberculosis - Pneumonia - Lung Abscess - Bronchiectasis - Pneumothorax 	02	04	06
<u>SEPTEMBER</u>				
Week 1	<ul style="list-style-type: none"> - Hydropneumothorax - Atelectasis - Pleuritis - Pleural Effusion - Empyema & other Pleural Disorders 	02	04	06
Week 2	Neonatal & Paediatric Respiratory Infection <ul style="list-style-type: none"> - ARDS - Meconium aspiration - Pneumonitis - Pneumonia - Childhood Asthma - Cystic fibrosis and chronic lung disease - 	02	04	06
Week 3	Pulmonary Surgeries Traumatic and Surgical conditions of Chest, Lung, Pleura and Mediastinum	02	04	06
Week 4	General abdominal & Oncological Surgeries <ul style="list-style-type: none"> - Pre and Post Operative care Complication & Management 	02	04	06
<u>OCTOBER</u>				
Week 1	Burns <ul style="list-style-type: none"> - Acute care Management Only - 	01	05	06
Week 2	Diabetic & Vascular Ulcers/ <ul style="list-style-type: none"> - Amputations (Stump care only) 	02	04	06
Week 3	Metabolic Syndrome <ul style="list-style-type: none"> - Diabetes (Mellitus & Insipidus) - Obesity 	02	04	06
Week 4	Musculoskeletal dysfunction	02	01	03

	<ul style="list-style-type: none"> - Flail chest - Scoliosis - Kyphosis 			
	APPLICATION OF ICF MODEL	02	00	02
<u>November</u>				
Week 1	Diwali Vacation			
Week 2	Pre Final Exam			
Week 3& 4	Preparatory Leave till university exam			

COMMUNITY PHYSIOTHERAPY

Sr. No.	Topic	Didactic Hours	Clinical Hours	Total Hours
1	HEALTH PROMOTION	10	15	25
2	WOMEN'S HEALTH	20	20	40
3	GERIATRICS HEALTH	20	20	40
4	REHABILITATION	11	20	31
5	HEALTHCARE DELIVERY & DISASTER MANAGEMENT	04	-	04
6	INDUSTRIAL HEALTH	20	20	40
7	SYNOPSIS	-	20	20
TOTAL		85	115	200

CLINICAL		- 115 hrs
1	UHC & PHC visits, Industrial Visit, Geriatric Home Visit	
2	Institutional adoption of close by area/ vicinity.	
3	Perform surveys in adopted localities for ANC, disability, exercises & health promotion, preventive aspects for smoking/ alcohol/ drugs in youth etc.	
4	Students may make a case dependent evaluation proforma/ questionnaire.	

MONTH & WEEK	Topics	Didactic Hours	Field Hours	Total Hours
FEBRUARY	CLINICAL POSTING			
MARCH	HEALTH PROMOTION	18	06	24
WEEK 1	a. W.H.O. definition of health and disease.	01		06
	b. Health Delivery System – 3 tier	01		
	c. Physical Fitness: definition and evaluation related to:	04		
WEEK 2	c. Physical Fitness: definition and evaluation related to:	04	02	06
WEEK 3	i. Effect in Growing Age	02	01	03
	ii. Effect in Obesity	02	01	03
WEEK 4	iii. Physical Fitness in women - Pregnancy, Menopause, Osteoporosis	02	01	03
	iv. Physiology of Aging – Related to physiological changes in Aging	02	01	03

	Preventive Measures in all the above groups of community with their related complications of physiological changes, growth, degenerative changes and lifestyle diseases.		
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APRIL	WOMEN'S HEALTH	20	16	36
WEEK 1	a. Women in India.	1	05	06
WEEK 2	b. Social issue having impact on physical Function.	1	05	06
WEEK 3	c. Legal rights and benefits related to health.	1	03	06
WEEK 4	d. Anatomical & Physiological variations associated with pregnancy & menopause.	8		06
MAY	e. Antenatal, post natal care, advice on labour positions, pain relief.	4	02	06
WEEK 1	f. Urogenital dysfunction, prolapse, incontinence, malignancy and their therapeutic interventions.	5	01	06
WEEK 2				
WEEK 3				
WEEK 4	SUMMER VACATION			
JUNE	MIDTERM EXAMINATION			
WEEK 1				
	GERIATRICS	20	20	40
WEEK 2	a. Senior citizens in India	1		
WEEK 3	b. NGO's and Health related Legal rights and benefits for the elderly.	1		
WEEK 4	c. Institutionalized & Community dwelling elders	1		
JULY	d. Theories of Aging	3		
WEEK 1	e. Physiology of ageing: Musculoskeletal, neurological, Cardio respiratory, metabolic changes	12		
WEEK 2				
WEEK 3	f. Scheme of evaluation & role of PT in Geriatrics.	2		
WEEK 4				
AUGUST	CONCEPTS OF REHABILITATION	11	13	24
WEEK 1	a. Disability- evaluation, types, prevention.	2		
WEEK 2	b. Rehabilitation- definition, types {Institutional, Reach out and Community}	1		
WEEK 3	c. National policies for rehabilitation of	1		
	d. Rehab Team work: Medical practitioner, P.T. / O.T., A.S.T., P.&O., Clinical psychologist, and vocational counselors and social workers.	2		
	e. CBR – Role of Physiotherapy & Physiotherapist	1		

WEEK 4	f. CBR strategies in: i. Urban area e.g. UHC, community centre, clubs, mahila mandals, Social centers, Schools, industries, sports centers. ii. Rural area- by using PHC / rural hospital, district hospital infrastructure. Loco motor aids using local resources.	4		
SEPTEMBER	INDUSTRIAL HEALTH	22	20	42
WEEK 1	INTRODUCTION TO DISASTER MANAGEMENT	2		2
	a. Introduction to Industrial Health: Definition, Model of Industrial Therapy (Traditional Medical & Industrial Model)	4		4
WEEK 2	b. Worker Care Spectrum: i. Ability Management – Job analysis:- Job description, Job demand Analysis, Task Analysis, Ergonomics Evaluation, Injury Prevention, Employee Fitness Program.	5	01	06
WEEK 3	ii. Disability Management: - Acute care, Concept of Functional Capacity assessment, Work Conditioning, Work Hardening.	5	01	06
WEEK 4	iii. Environmental stress in the industrial area – accidents due to a) Physical agents e.g. heat/cold, light, noise, vibration, UV radiation, ionizing radiation. b) Chemical agents- inhalation, local action and ingestion. c) Mechanical hazards-overuse/fatigue injuries due to ergonomic alternation and ergonomic evaluation of work place.	3	03	06
OCTOBER WEEK 1	iv. Mechanical stresses: a) Sedentary table work-executive’s clerk. b) Inappropriate seating arrangement-vehicle drivers.	3	03	06
WEEK 2	c) Constant standing- watchman, defense forces, surgeons.		06	06
WEEK 3	d) Over execution in labourer’s-stress management. e) Psychological hazards e.g. monotonicity and dissatisfaction in job, anxiety of work completion with quality, Role of PT. in industrial set up and stress management relaxation modes.		06	06
WEEK 4	CONCEPTS OF REHABILITATION		06	06

PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION)

March week 1	• Roles of Physiotherapist as patient manager, Consultant, Critical inquirer, Educator, Administrator	05	---	15
April week 1				
May week 1	• Laws and regulations	02		
June week 1	• Role of W.C.P.T. & Council	01		
July week 1	• Professional bodies	02		
August week 1	• Ethics in Research	01		
September week 1	• Ethics in Teaching	02		
October week 1	• Professional development, competence and expertise	02		
TOTAL		15		

ADMINISTRATION, MANAGEMENT & MARKETING
(COLLEGE EXAMINATION)

Total – 20 HRS

Month & week	Topics	Didactic Hours
March week 2 April week 2	Management studies related to –local health care organization Management & structure, planning delivery with quality assurance & funding of service delivery information technology career development in Physiotherapy.	05
May week 2	Administration-principles-based on the Goal & functions -at large hospital set up / domiciliary services/ private clinic /academics	03
June week 2	Methods of maintaining records	02
July week 2	Budget-planning	03
August week 2	Performance analysis--physical structure / reporting system [man power / status /functions / quantity & quality of services/turn over-cost benefit revenue contribution	03
September week 2	Setting up Therapeutic gymnasium, Fitness clinics, Cardiac and Pulmonary Rehab centers etc.	02
October week 2	Time management	02
TOTAL		20

PRINCIPLES OF BIOENGINEERING

(COLLEGE EXAMINATION)

(Didactic 27 hrs + Practical /Laboratory-03 hrs) **TOTAL 30 HRS**

Month & week	TOPIC	Didactic Hours
March week 3	Introduction to bioengineering- Classification of Aids & appliances (Splints/ Orthoses for spine, upper & lower limb; Prostheses for Lower limbs & Upper limbs)	1
March week 3	Biomechanical principles in designing of appliances & assessment; Procedures for static & dynamic alignment of the Orthoses & Prostheses:	26
	a. Introduction to Orthotics, Solid Ankle foot Orthoses (AFO)	1
	b. Articulated AFO, Various Shoe modifications	1
	c. Knee Ankle Foot Orthoses (KAFO)	1
April week 3	d. Knee Orthoses (KO)	1
	e. Hip Knee Ankle Foot orthoses (HKAFO), Hip Orthoses (HO)	1
	f. Fracture Bracing and Flexible Lumbo-sacral Orthoses (LSO) and Thoraco-Lumbo-sacral Orthoses (TLSO)	1
	g. Rigid TLSOs and Cervical Orthoses (CO)	1
May week 3	h. Orthotic mgmt. of Scoliosis, Milwaukee and low profile scoliosis orthoses, Scheuermann's Kyphosis & Osteoporosis	1
	i. Orthoses for LBP, Introduction to Upper limb Orthotics and Shoulder orthoses (SO)	1
	j. Shoulder (SO), Elbow Orthoses (EO) & Wrist Hand Orthoses (WHO)	2
June week 3	k. Introduction to Gait in relation to the use of Orthoses / Prostheses	1
	l. Prosthetic management of Forefoot amputees	1
	m. Prosthetic management of Syme's and hind foot Amputees	1
July week 3	n. Below Knee Prosthesis & Prosthetic foot pieces	1
	o. Alignment of Below Knee Prosthesis and gait deviations	1

	p. Prosthetic Knees and Knee Disarticulation mgmt.	
	q. Above Knee Prosthesis, alignment, gait deviations	1
	r. AK Checkouts, Prosthetic mgmt. of Hip Disarticulation, hemipelvectomy, Bilateral amputees and Congenital cases	1
August week 3	s. Introduction to Upper Limb Prosthetics, Prosthetic mgmt. of Partial Hand amputees	2
	t. Cosmetic Prostheses for all levels of Amputations	1
	u. Task Specific Prostheses, Prosthetic mgmt. of Wrist Disarticulation, Myoelectric Below Elbow prosthesis	2
September week 3	v. Body Powered Below Elbow Prostheses and it's components	1
	w. Harnessing in BE	1
	x. Prosthetic mgmt. of Elbow Disarticulation and Above Elbow Amputation.	1
October week 3	Project: Temporary splints: To fabricate ONE splint each [to use P.O.P, aluminum strips /sheets /wires rubber bands, Rexin, Orfit,etc]	3
	Splinting- Practical Demonstration of the following a) Cock up (dorsal/volar) b) Outrigger, c) Opponence splint d) Anterior and posterior guard splints for gait training, e) Foot drop splint f) Facial splint g) Mallet Finger Splint h) C bar for 1st web space of hand	

RESEARCH METHODOLOGY AND BIOSTATISTICS

(COLLEGE EXAMINATION)

[DIDACTIC: 30 HRS]

Month & week	Topics	Didactic Hours
March week 4	RESEARCH IN PHYSIOTHERAPY a. Introduction b. Research for Physiotherapist: Why? How? When? c. Research – Definition, concept, purpose, approaches d. Internet sites for Physiotherapists.	5
April week 4	RESEARCH FUNDAMENTALS a. Define measurement b. Measurement framework c. Scales of measurement d. Pilot Study e. Types of variables f. Reliability & Validity g. Drawing Tables, Graphs, Master chart	5
June week 4	WRITING A RESEARCH PROPOSAL a. Defining a problem b. Review of Literature c. Formulating a question, Operational Definition d. Inclusion & Exclusion criteria e. Methodology- Forming groups Data collection & method for analysis f. Informed Consent Steps of documentation – Title to Scope of study	3
June week 4	RESEARCH ETHICS a. Importance of Ethics in Research b. Main ethical issues in human subjects' research c. Main ethical principles that govern research with human subjects d. Components of an ethically valid informed consent for research.	2
July week 4	OVERVIEW OF STUDY DESIGNS a. Observational- i. Descriptive-Case study/ series, Cross sectional, Normative, Correlational ii. Analytical; case control, cohort b. Experimental- True & quasi experimental	3

August week 4	SAMPLING	3
	<ul style="list-style-type: none"> a. Random and non-random sampling. b. Various methods of sampling – simple random, stratified, systematic, cluster and multistage. Sampling and non-sampling errors and methods of minimizing these errors. 	
August week 4	BASIC PROBABILITY DISTRIBUTIONS AND SAMPLING DISTRIBUTIONS	2
	<ul style="list-style-type: none"> a. Concept of probability and probability distribution. b. Normal, Poisson and Binomial distributions, parameters and application. c. Concept of sampling distributions. d. Standard error and confidence intervals. e. Skewness and Kurtosis 	
September week 4	TESTS OF SIGNIFICANCE	3
	<ul style="list-style-type: none"> a. Basics of testing of hypothesis – Null and alternate hypothesis, type I and type II errors, level of significance and power of the test, p value. b. Tests of significance (parametric) - t – test (paired and unpaired), Chi square test and test of proportion, one way analysis of variance. c. Repeated measures analysis of variance. d. Tests of significance (non-parametric)-Mann-Whitney u test, Wilcoxon test, e. Kruskal-Wallis analysis of variance. Friedman’s analysis of variance. 	
September week 4	CORRELATION AND REGRESSION	1
	Simple correlation – Pearson’s and Spearman’s; testing the significance of correlation coefficient, linear and multiple regressions.	
October week 4	STATISTICAL DATA	2
	Tabulation, Calculation of central tendency and dispersion, Using software packages, Analysis, Presentation of data in diagrammatic & Graphic form	
October week 4	RESEARCH REPORT	1
	Overview, Types and Publication	