



Re-Accredited 'B++' 2.86 CGPA by NAAC

VEER NARMAD SOUTH GUJARAT UNIVERSITY

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વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી

યુનિવર્સિટી કેમ્પસ, ઉદ્ધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

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-: પરિપત્ર :-

તબીબી વિદ્યાશાખા હેઠળની તમામ ફિઝિયોથેરાપી કોલેજોના આચાર્યશ્રીઓને જણાવવાનું કે, શૈક્ષણિક ૨૦૨૨-૨૩ થી અમલમાં આવનાર Fourth Year B.Physiotherapy ના અભ્યાસક્રમ અંગે ફિઝિયોથેરાપી વિષયની અભ્યાસ સમિતિની તા.૨૨/૦૮/૨૦૨૨ની સભાનાં ઠરાવ ક્રમાંક: ૨ અન્વયે નીચે મુજબ કરેલ ભલામણ તબીબી વિદ્યાશાખાનાં ડીનશ્રીએ તબીબી વિદ્યાશાખાની મંજૂરીની અપેક્ષાએ તબીબી વિદ્યાશાખા વતી મંજૂર કરી એકેડેમિક કાઉન્સિલને કરેલ ભલામણ એકેડેમિક કાઉન્સિલની તા.૧૮/૧૦/૨૦૨૨ની સભાનાં ઠરાવ ક્રમાંક:૦૮ થી મંજૂર કરેલ છે. તેની જાણ સંબંધકર્તા શિક્ષકો અને વિદ્યાર્થીઓને કરવી તદ્દઉપરાંત તેનો અમલ કરવો.

ફિઝિયોથેરાપી વિષયની અભ્યાસ સમિતિની તા ૨૨/૦૮/૨૦૨૨ની સભાનાં ઠરાવ ક્રમાંક: ૨

:: આથી ઠરાવવામાં આવે છે કે, શૈક્ષણિક ૨૦૨૨-૨૩ થી અમલમાં આવનાર Fourth Year B. Physiotherapy ના અભ્યાસક્રમ મંજૂર કરી આગળની કાર્યવાહી માટે તબીબી વિદ્યાશાખાને ભલામણ કરવામાં આવે છે.

એકેડેમિક કાઉન્સિલની તા.૧૮/૧૦/૨૦૨૨ની સભાનાં ઠરાવ ક્રમાંક:૦૮

:: આથી ઠરાવવામાં આવે છે કે, શૈક્ષણિક ૨૦૨૨-૨૩ થી અમલમાં આવનાર Fourth Year B. Physiotherapyના અભ્યાસક્રમ અંગે વિચારણા કરતા ફિઝિયોથેરાપી વિષયની અભ્યાસ સમિતિની તા.૨૨/૦૮/૨૦૨૨ની સભાનાં ઠરાવ ક્રમાંક: ૨ અન્વયે ઉપરોક્ત મુજબ કરેલ ભલામણ તબીબી વિદ્યાશાખાનાં ડીનશ્રીએ તબીબી વિદ્યાશાખાની મંજૂરીની અપેક્ષાએ તબીબી વિદ્યાશાખા વતી મંજૂર કરી એકેડેમિક કાઉન્સિલને કરેલ ભલામણ સ્વીકારી મંજૂર કરવામાં આવે છે.

બિડાણ : ઉપર મુજબ

ક્રમાંક : એસ./પરિપત્ર/ફિઝિયોથેરાપી/ ૨૫૨૦૩/૨૦૨૨
તા. ૧૮/૧૦/૨૦૨૨


કુલસચિવ

પ્રતિ,

- ૧) તબીબી વિદ્યાશાખા હેઠળની તમામ ફિઝિયોથેરાપી કોલેજોના આચાર્યશ્રીઓ.
.....આપશ્રીની કોલેજ/વિભાગના સંબંધિત શિક્ષકોને જાણ કરી અમલ કરવા સારૂ.
- ૨) અધ્યક્ષશ્રી, તબીબી વિદ્યાશાખા
- ૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.
...તરફ જાણ તેમજ અમલ સારૂ.

એકેડેમિક કોર્સવર્ક તા. 19/10 -2022

પાનાં 9 મિનિયુટો 2

**DETAILED SYLLABUS
AND
COURSE CONTENTS
FOURTH YEAR BPT**

FOURTH YEAR B. PHYSIOTHERAPY

SCHEME OF EXAMINATION: SUBJECTS AND DISTRIBUTION OF MARKS

Sr. No.	Subject Code	Subject	Theory Marks		Practical Marks		Total Marks
			External	Internal	External	Internal	
1	PT0401	Physiotherapy in Neurological Conditions	80	20	80	20	200
2	PT0402	Physiotherapy in Musculoskeletal Conditions	80	20	80	20	200
3	PT0403	Physiotherapy in Cardio respiratory and Medical Surgical Conditions	80 (55+25)	20 (15+5)	80	20	200
4	PT0404	Community Physiotherapy Rehabilitation and assistive technologies	80 (55+25)	20 (15+5)	80	20	200
5	PT0405	Ethics and Management	40	10	-	-	50
Total			360	90	320	80	850

DISTRIBUTION OF HOURS

Paper No.	Subject Code	Subject	Theory Hours	Practical Hours	Total	No. of Hours / Week
I	PT0401	Physiotherapy in Neurological Conditions	120	20	140	4-5
II	PT0402	Physiotherapy in Musculoskeletal Conditions	120	20	140	4-5
III	PT0403	Physiotherapy in Cardiorespiratory and Medical Surgical Conditions	100	20	120	3-4
IV	PT0404	Community Physiotherapy Rehabilitation	60	-	60	2-3
		Assistive Technologies	30	-	30	
V	PT0405	<u>Recent Practice Trends</u>				1-2
		<ul style="list-style-type: none"> • Professional Practice & Ethics • Administration, Management and Marketing 	20 20	-	20 20	
		Supervised Clinical Practice (4 Hours/Day)	-	960	960	24

1. PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS

Subject Code: PT0401

Total Hours: 140

OBJECTIVES: -

At the end of the course candidate will be able to

1. Acquire the knowledge of normal neurodevelopment with specific reference to locomotion.
2. Assess, identify and analyze neuromotor and psychosomatic dysfunction in terms of alteration in the muscle tone, power, coordination, involuntary movements, sensations, perceptions etc.
3. Correlate the assessment findings with provisional diagnosis and investigations such as EMG/NCS and arrive at Physical and functional diagnosis with clinical reasoning in various neuromuscular disorders.
4. Plan, prescribe and execute short term and long term treatment with special reference to relief of neuropathic and psychosomatic pain and use of various physiotherapeutic techniques/ modalities, including ergonomic advice and parent education in neuro pediatric cases.
5. Prescribe appropriate orthoses/splints and fabricate temporary protective and functional splints.

SYLLABUS: -

1. Review of basic neuro anatomy and physiology
2. Physiotherapy techniques to improve tone, voluntary control, co-ordination.
3. Neuro physiotherapeutic Techniques: Concepts, principles, techniques and effects of: NDT, PNF, Brunnstrom movement therapy, Vojta therapy, Rood's sensory motor approach, Contemporary task-oriented approach.
4. Application of skills as PNF, co-ordination, functional re- education, balancing exercise by using techniques based on neuro physiological principles.
5. Tools used for neuro rehabilitation like vestibular balls, tilt board etc.
6. Application of transfer, functional re-education exercises & gait training.
7. Bladder training.
8. Developing a philosophy for caring.
9. Prescription of appropriate orthotic devices & fabrication of temporary splints.
10. Lifting techniques, wheel chair modifications, adaptive devices.
11. Ergonomic advice for prevention/rehabilitation to the patients / parents /caregivers.
12. Education about handling of a patient.
13. **Pediatric Neuro-physiotherapy**
Use of various Neurophysiological approaches & modalities in high risk babies, minimum brain damage, developmental disorders, Cerebral palsy, Down's syndrome, Hydrocephalus, Spina bifida.
14. **Assessment & management of brain Disorders**
Stroke, Meningitis, Encephalitis, Head Injury, Parkinson's disease, parkinsonism syndromes, Multiple sclerosis, Brain tumors.

15. **Assessment & management of spinal cord lesions and bladder dysfunction**
Multiple sclerosis, transverse myelitis, Poliomyelitis/PPRP, syringomyelia, spinalcord injury and sub-acute combined degeneration of spinal cord, Motor neuron disease (ALS, SMA and other types), spinal tumors.
16. **Assessment & Management of Co-ordination Disorders**
Ataxia, Friedriech's ataxia, Cerebellar ataxia, Sensory ataxia.
17. **Assessment & Management of Muscle Disorders**
Muscular dystrophy (DMD) & other myopathies.
18. **Assessment & Management of disorders of neuromuscular junction**
Myasthenia Gravis.
19. **Assessment & management of neuropathies and nerve injuries**
Emphasis on 5th, 7th and 8th cranial nerves, Peripheral nerves, Polyneuropathy – Classification of Polyneuropathies.
20. **Pre- and post-surgical assessment & management in neuro surgery**
Hydrocephalus and myelomeningocele, C.V. junction anomalies, syringomyelia
21. **Electro diagnostic procedures and prognosis in neurological disorders**
SD curves, EMG & NCS.

Topic Distribution for Paper Setting	
Section	Topic Sr. No.
I (40 Marks)	1-15
II (40 Marks)	16-21

2. PHYSIOTHERAPY IN MUSCULO-SKELETAL CONDITIONS

Subject Code: PT0402

Total Hours: 140

OBJECTIVES: -

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 advice 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, orthoses and prosthesis

SYLLABUS: -

Anatomy of bones and soft tissues (musculoskeletal system)

1. Evaluation, interpretation of investigations & functional diagnosis (ICF) with appropriate clinical reasoning for planning & implementation of management techniques.
2. Planning, Prescription & Implementation of short term & long term goals with clinical reasoning.
3. Documentation.
4. Different physiotherapeutic techniques for functional restoration/ maintenance and prevention of disability.
5. Different electro therapeutic techniques for relief of acute and chronic pain, swelling, wound healing, re-education with clinical reasoning.
6. Different physiotherapeutic techniques to improve/maintain muscle performance.
7. Different physiotherapeutic techniques to increase joint mobility.
8. Different physiotherapeutic strategies for correction / maintenance of good posture.
9. Different physiotherapeutic strategies to improve efficiency and safety of gait pattern.
10. Prescription of appropriate orthotic & prosthetic devices & fabrication of simple temporary splints.
11. Appropriate Home Program & Ergonomic advice for preventive measures & Functional efficiency at home & work place.
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.

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.
14. **Physiotherapy assessment & management of soft tissue injury**
Contusion, sprains, strains, ruptures.
15. **Physiotherapy assessment & management of degenerative conditions**
Osteoarthritis (OA) with emphasize on Knee, Hip and Hand cervical spondylosis, lumbar spondylosis.
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.
17. **Physiotherapy assessment and management of infective Conditions**
Tuberculosis (TB) of spine and other major joints, osteomyelitis, pyogenic arthritis, septic arthritis.
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.
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.
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.
21. **Rehabilitation of patient with orthopedic surgery**
Pre and post operative management of arthroplasty of all major joints, girdle stone arthroplasty, arthrodesis, arthroscopy, osteotomy, re-attachment of limb.
22. **Physiotherapy assessment & management of re-constructive surgery**
Cerebral Palsy, poliomyelitis, leprosy.
23. **Physiotherapy assessment & management of hand injury**
24. **Physiotherapy assessment & management of metabolic and hormonal disorders of the bone tissue**
Osteoporosis, rickets, osteomalacia.
25. **Physiotherapy assessment & management of miscellaneous orthopaedic conditions**

Mallet finger, trigger finger, Dequerian's disease, metatarsalgia, hallux valgus, Dupuytren's contracture, thoracic outlet syndrome, chondromalacia patellae, ganglion, tennis elbow, plantar fasciitis.

26. Sports Medicine

Introduction & classification of sports injury

Aetiological factors

Prevention of sports injury

Frequency and site of injury

Investigation and assessment in sports injury

27. Management of sports injuries

Pharmacology in sports

Rehabilitation in sports

Topic Distribution for Paper Setting	
Section	Topic Sr. No.
I (40 Marks)	1-20
II (40 Marks)	21-27

3. PHYSIOTHERAPY IN CARDIO RESPIRATORY & MEDICAL SURGICAL CONDITIONS

Subject Code: PT0403

Total Hours: 120

3.1 PHYSIOTHERAPY IN CARDIO-PULMONARY CONDITIONS

OBJECTIVES: -

At the end of the course candidate will be able to

1. Identify, discuss and analyze cardio vascular and pulmonary dysfunction based on pathophysiological principles and arrive at the appropriate physical and functional diagnosis.
2. Select strategies for cure, care and prevention to adopt restorative and rehabilitative measures for maximum possible functional independence of a patient at home, work place and in community
3. Execute the effective physiotherapeutic measures (with appropriate clinical reasoning) with special emphasis to breathing retraining, nebulization, humidification, bronchial hygiene, general mobilization and exercise conditioning in general medical and surgical conditions
4. Acquire knowledge of the overview of patients care at the intensive care area, artificial ventilation, suctioning, positioning for bronchial hygiene and continuous monitoring of the patient at the intensive care area
5. Acquire the skill of evaluation and interpretation of functional capacity using simple exercise tolerance tests, symptom limited tests
6. Acquire the skill of basic cardiopulmonary resuscitation

SYLLABUS: -

1. **Anatomy and physiology of respiratory & cardiac system**
Anatomy of thorax, biomechanics of thoracic cage, muscles of respiration, ventilation perfusion matching /mismatching, compliance
2. **Investigations and tests**
Sub maximal /maximal exercise tolerance testing, Cardiac & Pulmonary radiographs, PFT, ABG, ECG, hematological and biochemical Tests
3. **Physiotherapy techniques to increase lung volume**
Positioning, breathing exercises, Neurophysiological facilitation of respiration, mechanical aids - Incentive spirometry, CPAP, IPPB
4. **Physiotherapy techniques to decrease the work of breathing**
Measures to optimize the balance between energy supply and demand, positioning, Breathing re-education – Breathing control techniques, mechanical aids: IPPB, CPAP, BIPAP
5. **Physiotherapy techniques to clear secretions**
Hydration, Humidification & Nebulization, Mobilization and breathing exercises, postural drainage, Manual techniques: Percussion, vibration and shaking, ACBT,

Autogenic Drainage, Mechanical aids: PEP, Flutter, IPPB, facilitation of cough and huff, suctioning

6. Physiotherapy in common complications following surgery And Drug therapy

Drugs to prevent and treat inflammation, drugs to treat bronchospasm, drugs to treat breathlessness, drugs to help sputum clearance, drugs to inhibit coughing, drugs to improve ventilation, drugs to reduce pulmonary hypertension, drug delivery doses, inhalers and nebulizers

7. Introduction to ICU & mechanical ventilator

ICU monitoring – apparatus, airways and tubes used in the ICU - Physiotherapy in the ICU – common conditions in the ICU. Mechanical ventilator: types, modes of ventilator, advantages and disadvantages Oxygen therapy, CPR, aseptic precautions

8. Physiotherapy assessment & management techniques in Obstructive lung conditions

Chronic bronchitis, emphysema, asthma, bronchiectasis, cystic fibrosis

9. Physiotherapy assessment & management techniques in Restrictive lung conditions

Rib fracture, Pleural effusion, pleurisy and empyema, pulmonary embolism, pulmonary tuberculosis, atelectasis, pneumothorax, bronchopulmonary fistula, pneumonia, ARDS

10. Physiotherapy following Lung surgeries

Pre and post operative physiotherapy assessment and management in Lobectomy, Pneumonectomy, decortication, thoracoplasty

11. Pulmonary Rehabilitation

Definition, aims and objectives, team members, benefits, principles of exercise prescription and techniques of rehabilitation

12. Anatomy and physiology of cardiovascular system

Anatomy, blood supply and conduction system of heart

13. Physiotherapy assessment & management for cardiovascular disorders

Cardiovascular disease, congestive heart failure, myocardial infarction, valvular diseases of heart, cyanotic and acyanotic congenital heart diseases, endocarditis

14. Cardiac Rehabilitation

Definition, aims and objectives, team members, benefits, principles of Exercise prescription and techniques of rehabilitation

15. Physiotherapy assessment & management of vascular diseases

Venous: Thrombosis, phlebitis and phlebo-thrombosis, varicose veins, DVT, venous ulcers

Arterial: Berger's disease, acute and chronic arterial occlusion, lymphedema

3.2 PHYSIOTHERAPY IN GENERAL MEDICAL-SURGICAL CONDITIONS

OBJECTIVES: -

1. Acquire knowledge of rationale of basic investigative approaches in the medical system and surgical intervention regimes related to cardio vascular and pulmonary impairment

2. Select strategies for cure, care and prevention to adopt restorative and rehabilitative measures for maximum possible functional independence of a patient at home, workplace and in community
3. Acquire the knowledge of evaluation and physiotherapy treatment for obstetrics and gynecological surgical conditions
4. Acquire the knowledge of various conditions where physiotherapy plays a vital role in the rehabilitation (psychiatry, dermatology and ENT conditions)
5. Assess the various degrees of burns, plan and implement physiotherapy techniques for the rehabilitation of a burn and wound patient.

SYLLABUS: -

1. **Physiotherapy assessment & management for abdominal surgeries**
Surgeries on upper gastro- intestinal tract - oesophagus- stomach- duodenum, surgery on large and small intestine – appendicectomy, cholecystectomy, partial colectomy, illieostomy, nephrectomy.
Hernia: herniotomy, herniorraphy, hernioplasty.
2. **Physiotherapy Assessment & management in onco surgeries**
Mastectomy: simple, radical; hysterectomy; prostatectomy; neck dissection
3. **Physiotherapy in obstetrics and gynecology surgeries**
Electrotherapy and exercise therapy measures following pelvic repair and caesarean section.
4. **Wounds, local infections, ulcers, pressure sores**
UVR and other electrotherapeutic modalities for healing of wound, prevention of hypergranulated scars, relief of pain and mobilization
5. **Physiotherapy in burns, skin grafts and re-constructive plastic surgery**
6. **Physiotherapy in ENT conditions**
Non-suppurative otitis media, chronic suppurative otitis media, otosclerosis, labyrinthitis and mastoidectomy resulting into facial palsy, laryngectomy, pharyngeal – laryngectomy, tracheostomy and its care, sinusitis
7. **Physiotherapy in skin conditions**
Leprosy, acne, alopecia, psoriasis, syphilis
8. **Physiotherapy in psychiatric conditions**
Schizophrenia, depression, psychosis, anxiety
9. **Emergency Care**
Basic Life Support, First aid & emergency care, Biomedical waste management.

Topic Distribution for Paper Setting	
Section	Topic Sr. No.
I (55 Marks)	Cardiorespiratory Conditions
II (25 Marks)	Medical Surgical Conditions

4. COMMUNITY PHYSIOTHERAPY REHABILITATION AND ASSISTIVE TECHNOLOGIES

Subject Code: PT0404

Total Hours: 90

4.1 COMMUNITY PHYSIOTHERAPY REHABILITATION (60 Hours)

OBJECTIVES: -

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

1. Describe the general concepts about Health, Disease & Physical fitness
2. Describe policies for the rehabilitation of disabled and Role of Council to promote physiotherapy as a health delivery system
3. Describe the strategies to assess prevalence & incidence of various conditions responsible for increasing morbidity in the specific community, role of physiotherapy in reducing morbidity, expected clinical & functional recovery, reasons for non-compliance in specific community & environmental solution for the same
4. Describe the evaluation of disability & planning for prevention & rehabilitation.
5. Describe CBR in urban & rural set up, WHO policies, concept of team work, role of multi- purpose health worker
6. Identify with clinical reasoning the prevailing contextual (environmental & psychosocial, cultural) factors, causing high risk, responsible for various dysfunctions & morbidity related to lifestyle & specific community like women, aged, industrial workers & describe planning strategies of interventional policies to combat such problems.

SYLLABUS: -

1. **Concepts of community health**
Preventive, promotive, restorative and rehabilitative
WHO definition of health and disease
Health delivery system - 3 tier
2. **Disability types**
Physical & Psychological Evaluation, prevention & Legislation related to Persons with Disability (PWD)
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 counselor 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. **Health Care**
 - a. Prevention, Promotion & Restoration
 - b. In peri-pubertal age group
 - c. In women-pregnancy and menopause

- d. In Geriatrics- neuromusculoskeletal, cardiovascular, pulmonary, metabolic and degenerative conditions
 - e. In Obese / over weight
 - f. In Cardiovascular and Pulmonary conditions
 - g. In Diabetes
 - h. Health promotion for all
5. **Women and child care**
- a. Antenatal exercises, Specific Breathing exercises, Relaxation, Postural training, Pelvic floor strengthening exercises with clinical reasoning
 - b. Physiotherapy during labor
 - c. Postnatal exercises program after normal labor / labor with invasive procedures with clinical reasoning
 - d. Menopause - Osteoporosis, Mental health, Physiotherapy management
 - e. Preterm babies
 - f. Adolescent age group
 - g. Nutritional disorders in women and children
6. **Geriatrics**
Physiology of aging, environmental changes and adaptations, balance and falls
Role of Physiotherapy in geriatric population.
7. **Physical fitness**
Energy system, Endurance, Aerobic Exercise, pacing of activity.
8. **Ergonomics**
9. **IQ Testing**

4.2 REHABILITATION AND ASSISTIVE TECHNOLOGIES (30 Hours)

OBJECTIVES: -

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

1. Acquire knowledge about biomechanical principles of application of variety of aids & appliances used for ambulation, protection & prevention
2. Acquire in brief knowledge about various materials used for splints/Orthosis & Prostheses and selection criteria for splints/Orthosis & Prostheses
3. Acquire the skill of fabrication of simple splints made out of low-cost material.

SYLLABUS: -

1. Introduction and terminology: prosthesis and orthosis
2. Classification of orthosis and prostheses
3. Bio-mechanical principles of orthotic application
4. Bio-mechanical principles of prosthetic application
5. Orthotic appliances for Hip, Knee, Ankle & foot - Prescription and design & modification
6. Spinal conditions inclusive of fractures, spondylolisthesis, kyphosis, scoliosis etc.
7. Upper limb conditions – splinting prescriptions with principles
8. Prosthesis –

- Upper & lower limb; endo skeletal & exo skeletal,
 - Hip, knee & foot prosthetic components with k-levels
 - Upper limbs: cosmetic restoration, terminal devices (body powered), self-help devices (ADL equipments), myoelectric, microprocessor / sensor controlled (externally powered)
 - Adaptive devices
9. Psychological & Physiological aspects of orthotic and prosthetic application
 10. Material used in fabrication of Prosthetics & Orthotics briefly.
 11. Mobility aids:
Canes, crutches, walking frames, walkers, wheel chairs manual/ electrically powered.

Topic Distribution for Paper Setting	
Section	Topic Sr. No.
I (55 Marks)	Community Physiotherapy Rehabilitation
II (25 Marks)	Assistive technologies

5. ETHICS AND MANAGEMENT

Subject Code: PT0405

Total Hours: 40

5.1 ETHICS (20 Hours)

OBJECTIVES: -

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

1. Understand the moral values and meaning of ethics.
2. Acquire bedside manners and communication skills in relation with patients, peers seniors and other professionals.
3. Develop psychomotor skills for physiotherapist patient relationship.
4. Develop skill to evaluate and make decision for plan of management based on sociocultural values and referral practice.
5. Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals.
6. Develop bedside behavior, respect & maintain patients' confidentiality.
7. Understand the importance of council, its functioning and Act.

SYLLABUS: -

1. Outlines of Gujarat State Council for Physiotherapists (GSCPT) Act 2011 with more emphasis on formation, functions of council, importance for registration etc.
2. Ethical principles in health care services, research, teaching related to physiotherapy.
3. Scope of practice as patient manager, consultant, critical inquirer, educator, administrator.
4. Rules of professional conduct
 - a. Physiotherapy as a profession
 - b. Relationship with patients
 - c. Relationship at health care institution i.e. hospital, clinic etc.
 - d. Relationship with colleagues and peers
 - e. Relationship with medical and other professionals
5. Confidentiality and responsibility
6. Malpractice and negligence
7. Professional development, competence and expertise
8. Sale of goods: personal and professional standards
9. Legal aspects: legal responsibility of physiotherapists for their action in the professional context understanding liability and obligations in case of medico legal action.

5.2 ADMINISTRATION, MANAGEMENT & MARKETING (20 Hours)

OBJECTIVES: -

At the end of course the student will be able to:

1. Learn the management basics in fields of clinical practice, teaching, research and

- physiotherapy practice in the community.
2. Acquire communication skills in relation with patients, peers, seniors and other professionals & the community.
 3. Acquire the knowledge of the basics in managerial & management skills, & use of information technology in professional practice.
 4. Develop psychomotor skills for physiotherapy practice.
 5. Develop skill to evaluate and make decision for plan of management based on sociocultural values and referral practice.
 6. Develop behavioral skill and humanitarian approach while communicating with patients, relatives, society at large and co-professionals

SYLLABUS: -

1. Management studies related to local health care organization management & structure, planning delivery with quality assurance & funding of service delivery, information technology and career development in physiotherapy.
2. Administration-principles-based on the goal & functions at large hospital setup/domiciliary services/private clinic/ academics.
3. Budget-planning.
4. Performance analysis- physical structure/ reporting system (man power, status, functions, quantity & quality of services, turn over, cost benefit revenue contribution)
5. Setting up therapeutic gymnasium, fitness clinics, cardiac and pulmonary rehab centers etc
6. Time management

**BACHELOR OF PHYSIOTHERAPY – YEAR WISE SUBJECT
CONTENT**

First Year BPT	Second Year BPT	Third Year BPT	Fourth Year BPT
EXAM PAPERS			
Paper I: Human Anatomy	Paper I: Pathology & Microbiology	Paper I: General Medicine & Pediatrics	Paper I: Physiotherapy in Neurological Conditions
Paper II: Human Physiology	Paper II: Biochemistry & Pharmacology	Paper II: Surgery	Paper II: Physiotherapy in Musculoskeletal Conditions
Paper III: Exercise therapy- I & Basic Biomechanics	Paper III: Exercise therapy- II & Exercise Physiology	Paper III: Orthopedics & Traumatology	Paper III: Physiotherapy in Cardiorespiratory and Medical Surgical Conditions
Paper IV: Psychology & Sociology	Paper IV: Electrotherapy	Paper IV: Neurology, Obstetrics & Gynecology	Paper IV: Community Physiotherapy Rehabilitation and assistive technologies
Paper V: Biomedical Physics	Paper V: Kinesiology & Biomechanics	Paper V: Physical & Functional Diagnosis	Paper V: Ethics and Management
Paper VI: English	--	Paper VI: Research Methodology & Biostatistics	--
NON-EXAM PAPERS			
Orientation to Physiotherapy	ENT & Dermatology	Basics in Radiology & Diagnostic Procedure	--
First Aid	Basic Nursing	Psychiatry	--

8. DETAILED COURSE CONTENT

FIRST YEAR BPT

Paper No.	Subject Code	Subject title	Allotted Hours		Total Hours of study	No. of Hours / Week
			Theory	Practical		
I	PT0101	Human Anatomy*	150	100	250	7-8
II	PT0102	Human Physiology*	150	50	200	6-7
III	PT0103	Exercise therapy- I & Basic Biomechanics	100	100	200	6-7
IV	PT0104	Psychology & Sociology	40+40	***	80	2-3
V	PT0105	Biomedical Physics	80	***	80	2-3
VI	PT0106	English	40	***	40	1-2
Non-Exam papers						
A.	PTs0107	Orientation to Physiotherapy	30	***	30	1-2
B.	PTs0108	First Aid	40	***	40	1-2

*These subjects should be taken by respective medical faculty.

SECOND YEAR BPT

Paper No.	Subject Code	Subject title	Allotted Hours		Total Hours of study	No. of Hours / Week
			Theory	Practical		
I	PT0201	Pathology & Microbiology*	40+40	***	80	2-3
II	PT0202	Biochemistry & Pharmacology*	40+40	***	80	2-3
III	PT0203	Exercise therapy- II & Exercise Physiology	100	150	250	7-8
IV	PT0204	Electrotherapy	150	200	350	7-8
V	PT0205	Kinesiology & Biomechanics	150	***	150	6-7
Non-Exam papers						
A.	PTs0206	ENT & Dermatology	30	***	30	1-2
B.	PTs0207	Basic Nursing	30	***	30	1-2

*These subjects should be taken by respective medical faculty.

THIRD YEAR BPT

Paper No.	Subject Code	Subject title	Allotted Hours		Total Hours of study	No. of Hours / Week
			Theory	Practical		
I	PT0301	General Medicine & Pediatrics*	50+30	***	80	2-3
II	PT0302	Surgery*	80	***	80	2-3
III	PT0303	Orthopedics & Traumatology*	80	***	80	2-3
IV	PT0304	Neurology, Obstetrics & Gynecology*	50+30	***	80	2-3
V	PT0305	Physical & Functional Diagnosis	100	100	200	6-7
VI	PT0306	Research Methodology & Biostatistics	40+40	***	80	4-5
Non-Exam papers						
A.	PTs0307	Basics in Radiology & diagnostic procedures	20	***	20	1-2
B.	PTs0308	Psychiatry	20	***	20	1-2

*These subjects should be taken by respective medical faculty.

FOURTH YEAR BPT

Paper No.	Subject Code	Subject title	Allotted Hours		Total Hours of study	No. of Hours / Week
			Theory	Practical		
I	PT0401	Physiotherapy in Neurological Conditions	120	20	140	4-5
II	PT0402	Physiotherapy in Musculoskeletal Conditions	120	20	140	4-5
III	PT0403	Physiotherapy in Cardiorespiratory and Medical Surgical Conditions	100	20	120	3-4
IV	PT0404	Community Physiotherapy Rehabilitation	60	***	90	2-3
		Assistive technologies	30	***		
V	PT0405	Ethics and Management	40	***	40	1-2

11. SCHEME OF EXAMINATIONS

FIRST YEAR B.PT

Paper No.	Subject Code	Subject title	Duration of theory exam	Marks Distribution						
				Theory			Practical			Total
				External	Internal	Internal	External	Internal		
I	PT0101	Human Anatomy*	3 Hours	80	20	20	80	20	200	
II	PT0102	Human Physiology*	3 Hours	80	20	20	80	20	200	
III	PT0103	Exercise therapy- I & Basic Biomechanics	3 Hours	80	20	20	80	20	200	
IV	PT0104	Psychology & Sociology	3 Hours	80 (40+40)	20	20	***	***	100	
V	PT0105	Biomedical Physics	3 Hours	80	20	20	***	***	100	
VI	PT0106	English	2 Hours	40	10	10	***	***	50	

SECOND YEAR BPT

Paper No.	Subject Code	Subject title	Duration of theory exam	Marks Distribution						
				Theory			Practical			Total
				External	Internal	Internal	External	Internal		
I	PT0201	Pathology & Microbiology *	3 Hours	80 (40+40)	20	20	***	***	100	
II	PT0202	Biochemistry & Pharmacology*	3 Hours	80 (40+40)	20	20	***	***	100	
III	PT0203	Exercise therapy- II & Exercise Physiology	3 Hours	80	20	20	80	20	200	
IV	PT0204	Electrotherapy	3 Hours	80	20	20	***	***	100	
V	PT0205	Kinesiology & Biomechanics	3 Hours	80	20	20	***	***	100	

THIRD YEAR BPT

Paper No.	Subject Code	Subject title	Duration of theory exam	Marks Distribution						
				Theory			Practical			Total
				External	Internal	Total	External	Internal	Total	
I	PT0301	General Medicine & Pediatrics*	3 Hours	80 (50+30)	20	100	***	***	100	
II	PT0302	Surgery*	3 Hours	80	20	100	***	***	100	
III	PT0303	Orthopedics & Traumatology*	3 Hours	80	20	100	***	***	100	
IV	PT0304	Neurology, Obstetrics & Gynecology*	3 Hours	80 (50+30)	20	100	***	***	100	
V	PT0305	Physical & Functional Diagnosis	3 Hours	80	20	100	20	20	200	
VI	PT0306	Research Methodology & Biostatistics	3 Hours	80 (40+40)	20	100	***	***	100	

FOURTH YEAR BPT

Paper No.	Subject Code	Subject title	Duration of theory exam	Marks Distribution						
				Theory			Practical			Total
				External	Internal	Total	External	Internal	Total	
I	PT0401	Physiotherapy in Neurological Conditions	3 Hours	80	20	100	80	20	200	
II	PT0402	Physiotherapy in Musculoskeletal Conditions	3 Hours	80	20	100	80	20	200	
III	PT0403	Physiotherapy in Cardiorespiratory and Medical Surgical Conditions	3 Hours	80 (55+25)	20 (15+5)	100	80	20	200	
IV	PT0404	Community Physiotherapy Rehabilitation and assistive technologies	3 Hours	80 (55+25)	20 (15+5)	100	80	20	200	
V	PT0405	Ethics and Management	2 Hours	40	10	50	-	-	50	

TRANSCRIPT

Paper No.	Subject	Total Hours
First Year B.PT		
Papers for University Examination		
I	Human Anatomy	250
II	Human Physiology	200
III	Exercise therapy- I & Basic Biomechanics	200
IV	Psychology & Sociology	80
V	Biomedical Physics	80
VI	English	40
Non-Examination Papers		
A.	Orientation to Physiotherapy	30
B.	First Aid	40
	Clinical Observation	140
	Extra Curricular Activities (Conferences, Educational tours, sports & cultural activities)	100
Total Hours in First Year		1160
Second Year B.PT		
Papers for University Examination		
I	Pathology & Microbiology	80
II	Biochemistry & Pharmacology	80
III	Exercise therapy- II & Exercise Physiology	250
IV	Electrotherapy	250
V	Kinesiology & Biomechanics	150
Non-Examination Papers		
A.	ENT & Dermatology	30
B.	Basic Nursing	30
	Supervised Clinical Observation	140
	Extra Curricular Activities (Conferences, Seminars, Educational tours, sports & cultural activities)	100
Total Hours in Second Year		1110
Third Year B.PT		
Papers for University Examination		
I	General Medicine & Pediatrics	80
II	Surgery	80
III	Orthopedics & Traumatology	80
IV	Neurology, Obstetrics & Gynecology	80
V	Physical & Functional Diagnosis	200

VI	Research Methodology & Biostatistics	80
Non-Examination Papers		
A.	Basics in Radiology & diagnostic procedures	20
B.	Psychiatry	20
	Supervised Clinical Observation	450
	Extra Curricular Activities (Conferences, Seminars, Workshops, Educational tours, sports & cultural activities)	100
Total Hours in Third Year		1190
Fourth Year B.PT		
Papers for University Examination		
I	Physiotherapy in Neurological Conditions	140
II	Physiotherapy in Musculoskeletal Conditions	140
III	Physiotherapy in Cardiorespiratory and Medical Surgical Conditions	120
IV	Community Physiotherapy Rehabilitation	90
	Assistive technologies	
V	Ethics and Management	40
	Supervised Clinical Practice (4 hours/day)	960
Total Hours in Final Year		1490
Internship Program including Research Work		
I	Internship	1100
II	Research work	180
Total Hours in Internship		1280
Total Transcript Hours		6230