FACULTY OF PARAMEDICAL

FOURTH YEAR BACHELOR OF PHYSIOTHERAPY

ACADEMIC REGULATIONS

COURSE OF STUDY – SUBJECTS & HOURS DISTRIBUTION
YEAR WISE DISTRIBUTION OF HOURS

Fourth Year

Subject	Theory Hours	Practical Hours	Total
Physiotherapy In Musculoskeletal Conditions	120	20	140
Physiotherapy In Neurological Conditions	120	20	140
Physiotherapy In Cardiorespiratory and medical surgical conditions	100	20	120
Community Physiotherapy Rehabilitation	60		60
Assistive Technologies	30	-	30
Biostatistics & Research Methodology	50	-	50
Recent Practice Trends Professional Practice & Ethics Administration, Management andMarketing	20 20	-	20 20
Supervised Clinical Practice (4 Hours/Day)	-	960	960
Research Project & Field Work*	-	20	20
			1560

*Not for university exam.

FINAL YEAR BACHELOR OF PHYSIOTHERAPY EXAMINATION PATTERN

O.GEN B.P.T -10

SCHEME OF EXAMINATION: SUBJECTS AND DISTRIBUTION OFMARKS

Final Year B. Physiotherapy						
Sr No	**Subject**	Theory Marks		Practical Marks		Total Marks
		External	Internal	External	Internal	
1	Physiotherapy in Neurological Conditions	80	20	80	20	200
2	Physiotherapy in Musculoskeletal Conditions	80	20	80	20	200
3	Physiotherapy in Cardio respiratory & Medical Surgical Conditions	80 (55+25)	20 (15+5)	80	20	200
4	Community Physiotherapy Rehabilitation and assistive technologies	80 (55+25)	20 (15+5)	80	20	200
5	Ethics and Management	40	10	-	-	50
6	Biostatistics & Research Methodology	40	10	-	-	50
Total		**400**	**100**	**320**	**80**	**900**

STRUCTURE OF QUESTION PAPERS:

Paper-style for 80 marks subjects for University (External) examination (Including section I and II for 40 marks each)

Duration: **3 Hours**

Section-I

Que. 1 Long Answer	1 x 15 = 15	(Any 1 out of 2)
Que. 2 Short Answer	1 x 10 = 10	(Any 1 out of 2)
Que. 3 Very Short Answer	3 x 05 = 15	(Any 3 out of 4)

Section-II

Que. 4 Long Answer	1 x 15 = 15	(Any 1 out of 2)
Que. 5 Short Answer	1 x 10 = 10	(Any 1 out of 2)
Que. 6 Very Short Answer	3 x 05 = 15	(Any 3 out of 4)

Applicable for following subjects

Physiotherapy in Neurological Conditions
Physiotherapy in Musculoskeletal Conditions

Paper-style for 80 marks subjects for University (External) examination (Including section I for 55 Marks and Section II for 25 marks)

Duration: **3 Hours**

Section-I

Que. 1 Long Answer	1 x 15 = 15	(Any 1 out of 2)
Que. 2 Short Answer	2 x 10 = 20	(Any 2 out of 3)
Que. 3 Very Short Answer	4 x 05 = 20	(Any 4 out of 5)

Section-II

Que. 4 Long Answer	2 x 10 = 20	(Any 2 out of 3)
Que. 5 Short Answer	1 x 05 = 05	(Any 1 out of 2)

Applicable for following subjects

Physiotherapy in Cardiorespiratory Conditions (Section I)+ Physiotherapy in General Medical & Surgical Conditions (Section II)
Community Physiotherapy Rehabilitation (Section I)+ Assistive technologies (Section II)

Paper-style for 40 marks subjects for University (External) examination (Including section I only)

Duration: **2 Hours**

Section-I

Que. 1 Long Answer	1 x 15 = 15	(Any 1 out of 2)
Que. 2 Short Answer	1 x 10 = 10	(Any 1 out of 2)
Que. 3 Very Short Answer	3 x 05 = 15	(Any 3 out of 4)

Applicable for following subjects

Ethics and Management
Biostatistics & Research Methodology

FINALYEAR BACHELOR OF PHYSIOTHERAPY

1.PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS (FPB140101)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
			Theory (T)		Practical (P)		Total Marks	
Lecture	Practical	Total	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	20	140	80	20	80	20	100	100

OBJECTIVES

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

1. Acquire the knowledge of normal neurodevelopment with specific reference to locomotion.
2. Assess, identify and analyze neuro motor 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, Brainstorm 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, spinal cord 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 (FPB140102)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
			Theory (T)		Practical (P)		Total Marks	
Lecture	Practical	Total	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
120	20	140	80	20	80	20	100	100

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 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, 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 managementtechniques

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 fracture and dislocations including pelvis and spinal fracture

14.Phyisiotherapy 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, periarthritis, 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, wryneck

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 stonearthroplasty , arthrodesis, arthroscopy, oesteotomy Reattachment 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 orthopedic 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 (FPB140103)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
			Theory (T)		Practical (P)		Total Marks	
Lecture	Practical	Total	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
100	20	120	80 (55+25)	20 (15+5)	80	20	100	100

3.1 PHYSIOTHERAPY IN CARDIO-PULMONARY CONDITIONS

OBJECTIVES

At the end of the course the 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 monitoringof 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, work place 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 – apendicectomy, 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

Nonsuppurative otitis media, chronic suppurative otitis media, otosclerosis, labyrinthitis and mastoidectomy resulting into facial palsy, laryngectomy, pharyngeo – 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	**Topics**
I (55 marks)	Cardiorespiratory conditions
II (25 marks)	Medical surgical conditions

4.COMMUNITY PHYSIOTHERAPY REHABILITATION AND ASSISTIVE TECHNOLOGIES (FPB140104)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
			Theory (T)		Practical (P)		Total Marks	
Lecture	Practical	Total	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
60+30	-	90	80 (55+25)	20 (15+5)	80	20	100	100

4.1 COMMUNITY PHYSIOTHERAPY REHABILITATION

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 ofmulti-purpose health worker
6. (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 multipurposehealth 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 ASSISITIVE TECHNOLOGIES

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

Topic Distribution for Paper Setting	
Section	**Topics**
I (55 marks)	Community Physiotherapy Rehabilitation
II (25 marks)	Assistive technologies

5. ETHICS AND MANAGEMENT (FPB140105)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
			Theory (T)		Practical (P)		Total Marks	
Lecture	Practical	Total	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
20+20	-	40	40	10	-	-	50	-

5.1 ETHICS

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
- Physiotherapy as a profession
- Relationship with patients
- Relationship at health care institution i.e. hospital, clinic etc.
- Relationship with colleagues and peers
- 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

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 set up/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

6. BIO-STATISTICS & RESEARCH METHODOLOGY (FPB140106)

Teaching Scheme (Hours)			Evaluation Scheme (Marks)					
Lecture	Practical	Total	Theory (T)		Practical (P)		Total Marks	
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical
50	-	50	40	10	-	-	50	-

6.1 BIO-STATISTICS

OBJECTIVES: -

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

1. Recognize different variables as per their types and should be able to decide on how to treat them differently as per requirement
2. Differentiate complete enumeration and various forms of sampling (random: Simple, stratified, cluster, multi stage; non random: snow ball, quota, purposive, convenient) with understanding of merits and demerits of them
3. Decide when to apply what test or a measure of central tendency according to the need of the data and OBJECTIVES
4. Interpret a given output of regression or ANOVA according to the context.

SYLLABUS: -

1. Introduction to statistics in physiotherapy.
2. Understanding 'Data' and its types.
3. Presentation of various data: tables, graphs and descriptive statistics.
4. Measures of central tendencies (CT): mean, median, mode; merits and demerits; when to apply which measure of CT for the given data.
5. Measures of dispersion: range, mean deviation, standard deviation, coefficient of variance
6. Application of normal distribution and its properties.
7. Testing of hypothesis (measuring change):one sample with population, comparing two samples(Z test for proportion, difference of two proportion, independent sample 't' test, paired 't' test, chi square test.
8. Conceptual understanding of correlation, linear and multiple regression, analysis of variance (ANOVA) and analysis of co-variance (ANCOVA).
9. Complete enumeration and sampling methods: random: simple, stratified, cluster, multi stage; non random: snow ball, quota, purposive, convenient.
10. Simple statistical analysis through excel.

6.2 RESEARCH METHODOLOGY

OBJECTIVES:

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

1. Understand and differentiate various study designs.
2. List the need of methodical and regular literature search in research
3. Plan a study choosing an appropriate design for a given problem according to given objectives.

SYLLABUS: -

1. What is research? Why research?
2. Types of epidemiological studies & measurements of various indications.
3. Possible errors that may generate due to study design & how to overcome them.
4. How to read and what to read from journals.
5. Role of research in Physiotherapy.
6. Components of research proposal – introduction and rationale, material & methods, results and discussion.
7. Where to look for good literature and why.
8. The Evidence Based Practice.