CURRICULUM

2\textsuperscript{nd}, 3\textsuperscript{rd}, & 4\textsuperscript{th} Semester

DIPLOMA COURSE

PHYSIOTHERAPY TECHNOLOGY

Bungalow No. 86/D-5 Abdara Road University Town, Peshawar.

Phone No. 091-9216008 Fax No 091-9218630
Website: www.kpmf.edu.pk Email: info@kpmf.edu.pk
2nd Semester Plan

Paper A Physio relevant anatomy & Physiology
Paper B Kinesiology & Electro Mechanics

SPECIAL ANATOMY RELATED TO PHYSIOTHERAPY

Human Skeleton:
- Classification of Bones & Ligaments
- Muscular Attachments
- Important Bones & Joints

1. Description of Important Muscles:
- Innervations of Muscles
- Attachments of Muscles
- Contraction Relaxation Functions of Muscles

2. Nervous System:
- Central Nervous System (Brain & Spinal Cord)
- Peripheral Nervous System (Spinal Nerves & Plexuses)
- Cranial Nervous System (Introduction)

3. Respiratory System:
- Nasopharynx
- Larynx
- Trachea
- Bronchi
- Lungs & its Lobes & Segments

PHYSIOLOGY

1. Elementary knowledge & brief outlines only

- Composition & Functions of Bones & Joints
- Types of Muscles & Functions of various types of Muscles including Heart Muscles
- Functions of Brain, Spinal Cord & Nervous including Automatic Nervous System (Degeneration & Regeneration of Nervous, Spinal Reflex are)
- Blood Circulation Introduction to Vascular System

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KINESIOLOGY

1. Classification of Passive Movements:
   - Relaxed Passive Movements
   - Forced Passive Movements
   - It Techniques & Effects

2. Classification of Active Movements:
   - Active Movements & its Effects
   - Assisted Active Movements, its Techniques & Effect
   - Resisted Movements, its Techniques & Effect

3. Breathing Exercise:
   - Effect & Techniques

4. Posture Training & Control, Maintenance of Correct Posture

5. Suspension Therapy:
   - Introduction to Suspension
   - Simple Methods of Suspension
   - Effects & Uses

6. Pulley Circuit Introduction to Pulley & Weight Circuits, Effects & Uses of Pulley Circuits

7. Body Position, Effects, Uses & Muscle Works:
   - Standing
   - Kneeling
   - Sitting
   - Lying
   - Hanging
   - Pelvic Tilt

8. Relaxation:
   - Definition, Methods of Promoting Relaxation, Effects & Uses

9. Proprioceptive Neuromuscular Facilitation:
   - Basic Techniques, its Effects & Uses
10. Reduction of Walking:

- Without Aids
- With Crutches
- With Stick & Braces

**ELECTRO MECHANICS**

- Current from Cells & Main Supply
- D.C for Treatment
- Faradic & Sinusoidal Apparatus
- Electric Shocks, its Severity, Effects & Treatment, Precaution
- Physics of Heat & Radiations
  - Physical Effects of Heat & Temperature
  - Transmission of Heat
  - Wavelength & Frequency
  - Infra Red Rays & its Sources
  - Ultra Violet Rays, its Sources & Choice of Lamp for Treatment

**METHOD OF TEACHING**

- Lectures
- Demonstrations
- Practical Work

**ATTENDANCE**

- Every student has to attend 80% of the classes

**GRADING & EVALUATION**

- There shall be 3 monthly tests of 20 marks each, which shall be counted in the end comprehensive exam at the end of semester, passing marks shall be 60%

**RECOMMENDED BOOKS:**

- Cash Textbook of Physiotherapy for some Medical Conditions
- Cash Textbook of Physiotherapy in Some Surgical Conditions
- Cash Textbook of Neurological Conditions
- Cash Textbook of Rheumatology for Physiotherapists
- Practical Management of Spinal Injuries (Hardly & Elson)
- The Principles of Exercise Therapy (Gardiner)
- Interferential Therapy
PHYSIOTHERAPY

PLAN FOR 3rd SEMESTER

- Special Anatomy Related to Physiotherapy Part-2
- Special Physiology Related to Physiotherapy Part-2
- Kinesiology Part-2
- Electro Mechanics Part-2
- Physiotherapy in Some Medical Conditions Part-1
- Physiotherapy in Some Surgical Conditions Part-1
ANATOMY RELATED TO PHYSIOTHERAPY (Part-2)

1. Human Skeleton:
   - Classification of Bones
   - Classification of Ligaments
   - Classification of Muscles
   - Classification of Joints

2. Description of Important Muscles:
   - Intervention of Muscles (Lower Limb)
   - Attachment of Muscles (Lower Limb)

3. Urinary & Genital System:
   - Kidney
   - Urinary Bladder
   - Male Genital Organs
   - Female Genital Organs
   - Ureter
   - Urethra

4. Endocrine System:
   - Pituitary Gland
   - Thyroid Gland
   - Suprarenal Glands
   - Special organs
     - Eye
     - Ear
     - Nose
     - Skin
     - Hairs
     - Nails
     - Sweat Glands
SPECIAL PHYSIOLOGY RELATED TO PHYSIOTHERAPY (Part-2)

1. Physiology of Urinary System
2. Physiology of Digestive System
3. Physiology of Genital System
4. Physiology of Endocrine System
5. Physiology of Special Senses

KINESIOLOGY

1. Postral Training Control & Maintenance of Correct Posture
2. Suspension Therapy
   - Introduction
   - Simple Methods of Suspensions
   - Effects & Uses of Suspension Therapy

3. Pulley Circuits/Weight Circuits
   - Introduction/ Weight Circuits
   - Effects of Pulley Circuits/Weight Circuits
   - Uses of Pulley Circuits/Weight Circuits

4. Starting Position
   - Effects of starting Position
   - Uses of starting Position
   - Muscles work in starting Position
     - Standing
     - Kneeling
     - Sitting
     - Lying
     - Hanging
     - Pelvic Tilt

5. Relaxation
   - Definition
   - Method of Promoting Relaxation
   - Effects & Uses
6. **Proprioceptive Neuro Muscular Facilitation:**
   - Basic Techniques
   - Effect & Uses

7. **Re-Education of Walking**
   - Without Aids
   - Without Crutches
   - With Stick and Braces

**ELECTRO MECHANICS**

1. Current from Cells/Current from Main Supply
2. Direct Current for Treatment
3. Faradic & Sinusoidal Apparatus
4. **Electric Shock**
   - Its Effects
   - Its Treatment
   - Precaution

5. **Physics of Heat & Radiation**
   - Physical Effects of Heat & Temperature
   - Transmission of Heat
   - Wave Length & Frequency
   - Infra Red Rays & its Sources
   - Ultra Violet Rays, its Sources & Choice of Lamp for Treatment

**PHYSIOTHERAPY IN SOME MEDICAL CONDITION**  (Part-1)

1. **Physiotherapy in Respiratory System Disorder**
   - Bronchitis
   - Bronchiectasis
   - Pluricy
   - Empyema
   - Pneumonia
   - Lung Abscess
   - Lung Tuberculosis
   - Bronchial Asthma

2. **Physiotherapy in Joints Disease**
Osteoarthritis of Different Joints
Rheumatoid Arthritis of Different Joints
Ankylosing Spondilitis

PHYSIOTHERAPY IN SOME SURGICAL CONDITION (Part-1)

1. Physiotherapy in
   - Acute Inflammation
   - Sub Acute Inflammation
   - Chronic Inflammation

2. Physiotherapy in Different Types of Wound & Other Conditions
   - Wounds
   - Atrophy of Different Organs
   - Hypertrophy of Different Organs
   - Degeneration of Different Organs
   - Necrosis of Different Organs
   - Gangrene in Different Organs
   - Classification of Different Organs

3. Physiotherapy in Different Types of Shocks
   - Reversible Shocks
   - Irreversible Shocks

4. Physiotherapy in Different Types & Degrees of Burns

5. Physiotherapy in Different Types of Fractures
   - Simple Fractures
   - Compound Fractures
   - Comminuted Fractures
PHYSIOTHERAPY

4th SEMESTER PLAN

- Physiotherapy in Some Medical Conditions
- Physiotherapy in Some Surgical Conditions
- Electrotherapy
- Hydrotherapy
- Message
- Physiotherapy Techniques
PHYSIOTHERAPY IN SOME MEDICAL CONDITIONS

1. Disorder of the Nervous System
   - Poliomyelitis
   - Vascular Disease of the Brain
   - Chorea
   - Parkinsonism
   - Neuritis
     - Sciatic Neuritis
     - Fascial Paralysis
     - Neuralgias
   - Monoplegia
   - Paraplegia
   - Hemiplegia
   - Quadri Plegia

PHYSIOTHERAPY IN SOME SURGICAL CONDITIONS

1. Physiotherapy Management of Dislocations
2. Physiotherapy Managements of Deformities
   - Congenital Deformities
   - Acquired Deformities
3. General Post op-care of Patients in Physiotherapy
4. Physiotherapy in Chest Surgery
   - Emphyema
   - Lobectomy
   - Lung Collapse
   - Pneumonectomy
5. **Physiotherapy in Traumatic Conditions**

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**ELECTROTHERAPY**

1. Technique & Application of Galvanic Current, its Effects, Uses, Introduction & Precautions
3. Technique, Uses & Effects of Sinusoidal Current, Physiological & Therapeutic Effects.
4. Micro Wave Diathermy, its Uses, Effect & Danger
5. Jonisation
6. Short Wave Diathermy, its Different Techniques, Physiological Therapeutic Effects, Uses, Dangers, Precautions & Contra Indication
7. Ultra Sonic, its Techniques, Uses & Effects
8. Infra Red Rays
   - Physiological Effects & Therapeutic Effects & Dangers

9. **Ultra Violet Rays**
   - Physiological Effects & Therapeutic Effects & Dangers.

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**HYDROTHERAPY**

1. Physiological Principles of Hydrotherapy
3. The Use of Water as a Medium for Movements

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**MASSAGE**

1. Different Techniques of Massage
2. Effects of Massage
3. Uses of Massage
PHYSIOTHERAPY TREATMENT & TECHNIQUES

1. **Introduction to the Following.**
   - Posture Suspension Therapy, Hydrotherapy, Pulley Circuits & Pulley and Weight Circuits

2. **Massage, Manipulation, Techniques & Effects** (In Detail)

3. **Re-Education of Different Muscles, its Techniques, Uses & Effects**

4. **Re-Education of Walking**
   - Without Aid
   - With Crutches
   - With Stick & Bracces

5. **General Breathing Exercise, its Effect & Uses, Localised & Specialized Breathing Exercise**

6. **Mobilization of Different Joints & Coordination of Movements**

7. **Nervous System**
   - Principles of Treatment of Nervous Disease
   - Classification of Nervous Disease
     - Upper Motor Neuron Disease
     - Lower Motor Neuron Disease

Lesions of upper motor neuron.
Hemiplegia-cerebral palsy-paraplegia
Lesion of the lower Motor neuron
Poliomyelitis, progressive Muscular atrophy

8. **Lesion of Peripheral Nerves** - Its Principles of Treatment
   - Ulnar Nerve Paralysis
   - Erb’s Paralysis
   - Median Nerve Paralysis
   - Facial Nerve Paralysis
   - Radial Nerve Paralysis
   - Lateral Propleteal Nerve Paralysis
   - Circniflex Nerve Paralysis
9. **Cardiovascular System**
   - Its Principles of Treatment

10. **Respiratory Tracts**
    - Its Principle of Treatment
    - Chronic Bronchitis
    - Bronchiectasis
    - Pneumonia
    - Asthma
    - Empyema
    - Emphysema
    - Tuberculosis

11. **Disease of Joints**
    - Traumatic Synovitis & Arthritis
    - Rheumatoid Arthritis
    - Osteo Arthritis
    - Bursitis osteomyilites

12. **Fractures, General Consideration and Principle of Treatment**
    - Fractures of the Upper Extremity Splinting & Support
    - Fractures of Lower Extremity Splinting & Support

13. **Joint & Muscular Injuries**

14. **- Principle of Treatment**
    - Dislocation of Upper & Lower Extremity, Sprain & Strain of Wrist, Ankle & Back and Tennis Elbow

15. Deformities of the Upper & Lower Extremities

16. **- General Principles of Treatment**

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**PRACTICAL & DEMONSTRATIONS**

1. Recognition of All Physiotherapy Instruments/Equipments & Appliances
2. Cleanliness & Maintenance & Care of Instruments/Equipments & Appliances
3. Types of Splint & Their Uses
4. Practice of Massage
5. Passive Movement of All Individual Joints
6. Assisted Active Movements of All Individual Joints
7. Re-Medical Exercise, its Techniques, Uses & Effects
8. Practical Class in Pulley & Weight Circuits
9. Clinical Demonstration on Patients
10. Bandaging & Splinting Including Plaster Work
11. Progressive Treatment in All Medical & Surgical Condition

**NOTE**

Practical classes will be held throughout the whole 2 years Training Course in the working hours without any vacation i.e. (Summer, Winter & Spring)