

KHYBER PAKHTUNKHWA MIDICAL FACULTY PESHAWAR

CURRICULUM

2nd, 3rd, & 4th Semester

DIPLOMA COURSE

PHYSIOTHERAPY TECHNOLOGY



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

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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 (Introduction)

3. Respiratory System:

- Nasopharynx
- Larynx
- Trachea
- Bronchi
- Lungs & its Lobes & Segments

PHYSIOLOGY

1. Elementry knowledge & brief out lines 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

- Physiology of Respiratory System, Effect of Exercise on Respiration

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. Re-education of Walking:

- Without Aids
 - With Crutches
 - With Stick & Braces
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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 & it Sources
 - Ultra Violet Rays, it Sources & Choice of Lamp for Treatment
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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 in 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

- ✓ Adult Hemipelgia Evaluation & Treatment (Boath)
- ✓ Orthopedic Splints & Appliances (Joan M Kenedy)

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

ANATOMYT 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. Postural 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
- Pheumonia
- Lung Absess
- Lung Tuberculosis
- Bronchial Ashtma

2. Physiotherapy in Joints Disease

- Osteoarthritis of Different Joints
- Rheumatoid Arthritis of Different Joints
- Ankylosing Spondylitis

PHYSIOTHERAPY IN SOME SURGICAL CONDITION (Part-1)

1. Physiotherapy in

- Acute Infl-----
- Sub Acute Infl-----
- Chronic Infl-----

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
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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

- Empyema
- Lobectomy
- Lung Collapse
- Pneumonectomy

5. Physiotherapy in Traumatic Conditions

ELECTROTHERAPY

1. Technique & Application of Galvanic Current, its Effects, Uses, Introduction & Precautions
2. Technique & Application of Faradic Currents, its Effects, Uses, Dangers, Indications, Contra Indications & 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
 2. Application of Cold hot, methods of applying most, Heat, Contrast Bath, Paraffin Wax Bath, Whir Pool Bath, Techniques, Effects, Uses, Dangers & Contraindications of each
 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 & Braces

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 Popliteal Nerve Paralysis
- Circumflex 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 osteomyelitis

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

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 through out the whole 2 years Training Course in the working hours without any vacation i.e (Summer, Winter & Spring)