SIXTH SEMESTER

1. **PATHOLOGY & MICROBIOLOGY - II**
2. **PHARMACOLOGY - II**
3. **PHYSICAL AGENTS & ELECTROTHERAPY - II**
4. **MANUAL THERAPY**
5. **TEACHING METHODOLOGY & COMMUNITY MEDICINE**
6. **SUPERVISED CLINICAL PRACTICE - II**

PATHOLOGY & MICROBIOLOGY - II

CREDIT 3 (2-1)

COURSE DESCRIPTION:

Students will develop an understanding of pathology underlying clinical disease states and involving the major organ systems. Epidemiological issues will be presented and discussed. Students will learn to recognize pathology signs and symptoms that are considered “red flags” for serious disease. Students will use problem-solving skills and information about pathology to decide when referral to another health care provider or alternative intervention is indicated. Students will be expected to develop the ability to disseminate pertinent information and findings, and ascertain the appropriate steps to follow.

COURSE OUTLINE:

THE INTEGUMENTARY SYSTEM

- Skin Lesions
- Signs and Symptoms of Skin Disease
- Aging and the Integumentary System
- Common Skin Disorders
- Skin Infections
- Skin Cancer
- Skin Disorders Associated With Immune
- Dysfunction
- Thermal Injuries
- Miscellaneous Integumentary Disorders.

THE CARDIOVASCULAR SYSTEM

- Signs and Symptoms of Cardiovascular Disease
- Aging and the Cardiovascular System
- Gender Differences and the Cardiovascular System
- Diseases Affecting the Heart Muscle
- Disease Affecting the Cardiac Nervous System
- Diseases Affecting the Heart Valves
- Diseases Affecting the Pericardium
- Diseases Affecting the Blood Vessels

- Other Cardiac Considerations.

THE LYMPHATIC SYSTEM

- Anatomy and Physiology
- Inflammation and Infection in the Lymphatic System.

THE RESPIRATORY SYSTEM

- Aging and the Pulmonary System
- Infectious and Inflammatory Diseases
- Obstructive Diseases
- Environmental and Occupational Diseases
- Near Drowning
- Congenital Disorders
- Parenchymal Disorders
- Disorders of the Pulmonary Vasculature
- Disorders of the Pleural Space

PATHOLOGY OF THE MUSCULOSKELETAL SYSTEM
INTRODUCTION TO PATHOLOGY OF THE MUSCULOSKELETAL SYSTEM

- Advances in Musculoskeletal Biotechnology
- Biologic Response to Trauma
- Aging and the Musculoskeletal System
- The Musculoskeletal System and Exercise
- Musculoskeletal System Disease.

GENETIC & DEVELOPMENTAL DISORDERS

- Down syndrome
- Scoliosis
- Kyphoscoliosis
- Spina Bifida Occulta, Meningocele, Myelomeningocele
- Developmental Dysplasia of the Hip
- Neuromuscular Disorders
- Torticollis
- Erb's Palsy
- Osteogenesis Imperfecta
- Arthrogryposis Multiplex Congenita.

METABOLIC DISORDERS

- Osteoporosis
- Osteomalacia
- Paget's Disease.

INFECTIOUS DISEASES OF THE MUSCULOSKELETAL SYSTEM

- Osteomyelitis

- Infections of Prostheses and Implants
- Diskitis
- Infectious (Septic) Arthritis
- Infectious (Inflammatory) Muscle Disease
- Extra pulmonary tuberculosis
- Summary of Special Implications for the Therapist.

MUSCULOSKELETAL NEOPLASMS

- Primary Tumors
- Primary Benign Bone Tumours
- Primary Malignant Bone Tumours
- Multiple Myeloma
- Primary Soft Tissue Tumours
- Metastatic Tumours.

SOFT TISSUE, JOINT AND BONE DISORDERS

- Soft Tissue
- Joint
- Bone.

PATHOLOGY OF THE NERVOUS SYSTEM
INTRODUCTION TO CENTRAL NERVOUS SYSTEM DISORDERS

- Overview
- Pathogenesis
- Clinical Manifestations
- Diagnosis
- Treatment
- Prognosis.

INFECTIOUS DISORDERS OF THE CENTRAL NERVOUS SYSTEM

- Overview
- Meningitis
- Encephalitis
- Brain Abscess
- Prion Disease.

CENTRAL NERVOUS SYSTEM NEOPLASMS

- Primary Brain Tumours
- Specific Primary Brain Tumours
- Primary Intraspinal Tumours
- Metastatic Tumours
- Paraneoplastic Syndromes
- Leptomeningeal Carcinomatosis
- Pediatric Tumours.

DEGENERATIVE DISEASES OF THE CENTRAL NERVOUS SYSTEM

- Amyotrophic Lateral Sclerosis
- Alzheimer's Disease, Alzheimer's Dementia, and Variants
- Dystonia
- Huntington's Disease
- Multiple Sclerosis
- Parkinsonism and Parkinson's Disease.

STROKE

- Stroke
- Vascular Disorders of the Spinal Cord.

MEDICAL MICROBIOLOGY

G +VE COCCI

- Staphylococci
- Streptococci.

G -VE COCCI

- Nessessia.

G +VE SPORE FORMING RODS

- Bacillies
- Clostridia
- G –ve rods (introduction to Enterics).

ACID FAST BACILLI

- Mycobacteria.

SPIROCHETES

- Introduction
- Treponemes.

BASIC VIROLOGY

- General characteristics
- Viral structure
- Nomenclature and classification.

MYCOLOGY

- Introduction to mycology.

PARASITOLOGY

- Introduction to protozoan.

PRACTICAL TRAINING/ LAB WORK:

- To study the microscope
- To study the calcification

- To study the osteogenic sarcoma
- To study the granulation tissue
- To study the chronic inflammation (cholecystitis)
- To study the acute inflammation (appendicitis)
- To Fibroedenoma
- To study the carcinoma of breast
- To study the actinomycosis
- To study the culture media
- To study the gram staining
- To study the Z-N staining
- To study the giant cell tumour
- Examination of urine.

RECOMMENDED TEXT BOOKS:

1. *Pathology: implications for the Physical therapist* by: Catherine cavallaro Goodman, 3rd edition.
2. *Basics & advanced Human Pathology, Pathology* by Robbins.
3. *Introduction to Pathology* by Weight.
4. *Lecture notes on Pathology by* Thomas and Cotton.
5. *General Pathology* by Florey *Medical Microbiology and Immunology* By: Levinson and Jawetz, 9th Ed., McGraw-Hill.

PHARMACOLOGY - II

CREDIT HOURS 2 (2-0)

COURSE DESCRIPTION:

This course covers the basic knowledge of pharmacology including administration, physiologic response and adverse effects of drugs under normal and pathologic conditions. Topics focus on the influence of drugs in rehabilitation patient/client management. Drugs used in iontophorosis and phonophorosis will be discussed in detail.

COURSE OUTLINE:

RESPIRATORY AND GASTROINTESTINAL PHARMACOLOGY

- Respiratory drugs
- Gastrointestinal Drugs.

ENDOCRINE PHARMACOLOGY

- Introduction to Endocrine Pharmacology
- Adrenocorticosteroids
- Male and Female hormones
- Thyroid and Parathyroid Drugs; Agents affecting bone mineralization
- Pancreatic Hormones and the Treatment of Diabetes Mellitus.

CHEMOTHERAPY OF INFECTIOUS AND NEOPLASTIC DISEASES

- Treatment of Infections; Antibacterial Drugs
- Treatment of Infections; Antiviral Drugs
- Treatment of Infections; Antifungal and Ant parasitic drugs
- Cancer Chemotherapy
- Immunomodulating Agents.

DRUGS USED IN CURRENT PHYSICAL THERAPY PRACTICE

- Drugs administered by Iontophorosis and Phonophrosis
- Potential Interactions Between Physical Agents and Therapeutic drugs.

RECOMMENDED TEXT BOOK:

1. Pharmacology in Rehabilitation (3rd Edition) By Charles D. Ciccone.
2. Pharmacology, Richard A, Harvey, 2nd Edition, Lippincott's.
3. Mutlianthore text book of Pharmacology and Therapeutics, M. Cheema, A Vol 1 and Vol 2.

PHYSICAL AGENTS & ELECTROTHERAPY - II

CREDIT HOURS 3 (2-1)

COURSE DESCRIPTION:

This course tends to explore further fundamental skills in application of electromodalities and knowledge of indications, contraindications and physiological principles needed for appropriate patient care. It includes topics such as infra red, ultra violet, cryotherapy, hydrotherapy, Iontophoresis, ultrasound /Phonophoresis, electrodiagnostic testing, traction, compression laser therapy etc.

COURSE OUTLINE:

MEDIUM FREQUENCY CURRENT

- Interferential Current
- Introduction, physical principles, electro-physiological effects
- Clinical applications, methods of application
- Treatment consideration & contraindications.

PHYSICS OF HEAD AND RADIATION

- Definition of heat and temperature
- Physical effects
- Transmission of heat
- Radiant energy electromagnetic spectrum its production & properties
- Laws governing radiation.

INFRA-RED RAYS

- Definition

- Production, luminous & non-luminous generators
- Physiological effects
- Therapeutic effects
- Uses
- Techniques of application
- Dangers and contraindications.

ULTRA VIOLET RAYS

- Production, U.V. rays
- Mercury Vapour Lamp: Air cooled mercury vapour lamp & Kromayer lamp
- Fluorescent Tubes
- Penetration of rays into the skin
- Physiological effects (local & general)
- Therapeutic effects
- Sensitizers
- Assessment of doses
- Test dose
- Techniques of local and general radiation with special techniques of treatment of wounds
- Techniques with compression
- Dangers & precautions
- Contraindications.

HELIOTHERAPY

- Introduction
- Effects
- Uses
- dangers and contraindications.

ULTRASONIC THERAPY

- Introduction
- Production
- Physiological & therapeutic effects
- Uses, dangers, precautions & contraindications
- Techniques and application of treatment.

CRYOTHERAPY

- Definition
- Methods
- Physiological & therapeutic effects
- Dangers, indications and precautions.

HYDROTHERAPY

- Physiological principles of hydrotherapy

- Application of heat & cold
- Outline of methods of applying moist heat
- Medium used, contrast bath, paraffin baths, whirlpool baths, techniques, effects, uses, dangers, contraindications of each
- The use of water as medium of each, the use of water as a medium of movement pool therapy
- Immersion baths, full, plain and medicated, partial baths, packs, general local methods of application
- Hot air, vapors, the car of patients in hydrological department
- Detailed description of indication of hydrotherapy.

TRACTION

- Effects of spinal traction
- Clinical indications for the use of spinal traction
- Contraindications and precautions for spinal traction
- Adverse effects of spinal traction
- Application technique.

COMPRESSION

- Effects of External Compressions
- Clinical indications for the Use of External Compression
- Contraindications and Precautions of External Compression
- Contraindications for the Use of Intermittent or Sequential Compression Pumps
- Precautions for the Use of Intermittent or Sequential Compression Pumps
- Adverse Effects of External Compression
- Application Techniques.

LASER THERAPY

- Definition
- Properties of laser
- Production of Lasers
- Types of Lasers
- Techniques of application
- Dosage parameters
- Interaction of laser with body tissues
- Physiological and therapeutic effects of lasers
- Dangers and contraindications
- Methods of Treatment.

PRACTICAL TRAINING/LAB WORK:

The practical training will be practiced in physiotherapy treatment ward under the supervision of qualified physiotherapists.

- Practical application of Infra red rays
- Practical application of ultrasound including Phonophoresis

- Supervised application of Ultraviolet rays including determination of test dosage
- Practical application of cold packs
- Practical application of traction
- Paraffin Wax bath application
- Demonstration of techniques during practical classes, later on techniques practiced by students on patients attending the department under supervision of trained physiotherapists.

Note:
The students are expected to make a record of his/her achievements in the log book. The log book is a collection of evidence that learning has taken place. It is a reflective record of achievements. The log book shall also contain a record of the procedures which student would have performed/observed.

RECOMMENDED TEXT BOOKS:

1. *Clayton's Electrotherapy and Actinotherapy*, 10th edition by PM Scott.
2. *Electrotherapy: Evidence based Practice*, 11th edition by Shelia Kitchen.
3. *Michelle H Cameron's Physical Agent in Rehabilitation: From research to Practice.*
4. *Electrotherapy and Electrodiagnosis* by S. Lient.
5. *Applications of Shortwave Diathermy* by P. M. Scott.
6. *Practical Electrotherapy* by Savage.

MANUAL THERAPY

CREDIT HOURS 3 (2-1)

COURSE DESCRIPTION:

Through the utilization of instruction, demonstration, practical exercises, research article critical review and case study discussions and presentations this course will provide the best evidence in state of the art advanced manual therapy A detailed overall review of all Manual Therapy techniques, along with manual therapy techniques covering spine and Temporo-Mandibular joint, will take place Techniques covered are: advanced myofascial trigger point therapy, Proprioceptive training, muscle energy combination techniques, strain counter strain, neuromobilization combination techniques and mobilization, manipulation techniques with emphasis on thrust manipulation Thorough evaluation, assessment and technique selection training will take place utilizing evidence based models such as APTAs "Open Door" and "Hooked in Evidence" programs All skills will be introduced through on-site demonstration and hands-on practice Students will also get significant exposure in critical review of research articles pertaining to application of manual therapy techniques Case review, discussion and case presentations are an important component of this course.

COURSE OUTLINE:

INTRODUCTION TO MANUAL THERAPY
OMT (ORTHOPEDIC MANUAL THERAPY) KALTENBORN-EVJENTH CONCEPT

- History
- Special features
- Overview.

PRINCIPLES
SPINAL MOVEMENT

- The mobile segment
- Spinal range of movement
- Joint positioning for evaluation and treatment
- Three-dimensional joint positioning
  - Resting position
  - Actual resting position
  - Nonresting positions
- Joint locking
- Bone and joint movement
- Rotations of a vertebral bone
  - Standard bone movements
  - Combined bone movements
  - Coupled movements
  - Noncoupled movements
- Joint roll-gliding associated with bone rotations
  - Joint roll-gliding
  - Abnormal roll-gliding
- Translation of vertebral bone
- Joint play associated with bone translation.

TRANSLATORIC JOINT PLAY

- The Kaltenbom Treatment Plane
- Translatoric Joint Play Movements
- Determining the direction of restricted gliding
- Glide test
- Kaltenbom Convex-Concave Rule
- Grades of translatoric movement
- Normal grades of translatoric movement (Grades I - III)
  - Palpating resistance to normal movement
- Pathological grades of translatoric movement
- Using translatoric grades of movement.

TESTS OF FUNCTION

- Principles of function testing
- Assessing quantity of movement
  - Measuring rotatoric movement with a device

    - Manual grading of rotatoric movement (- scale)
- Assessing quality of movement
    - Quality of movement to the first stop
    - End-feel: Quality of movement after the first stop
- Elements of function testing
- Active and passive rotatoric movements
    - Testing rotatoric movement
    - Localization tests
    - Differentiating articular from extra-articular dysfunction
    - Differentiating muscle shortening from muscle spasm
- Translatoric joint play tests
- Resisted movements
- Passive soft tissue movements
- Additional tests.

OMT EVALUATION

- Goals of the OMT evaluation
- Physical diagnosis
- Indications and contraindications
- Measuring progress
- Elements of the OMT evaluation
- Screening exam
- Detailed exam
    - History
    - inspection
    - Tests of function
    - Palpation
    - Neurologic and vascular tests
- Medical diagnostic studies
- Diagnosis and trial treatment.

SPINAL JOINT MOBILIZATION

- Goals of joint mobilization
- Mobilization techniques
- Pain relief mobilization
    - Pain-relief traction mobilization (Grade I -IISZ)
    - Vibrations and oscillations
- Relaxation mobilization
    - Relaxation-traction mobilization (Grade I -II)
- Stretch mobilization
    - Stretch-traction mobilization (Grade III)
    - Stretch-glide mobilization (Grade /)
- Manipulation
- If traction exacerbates symptoms
- A voiding high-risk manual treatment
    - Rotation mobilization

- Joint compression.

OMT TREATMENT

- Elements of OMT
- Treatment to relieve symptoms
  - Immobilization
  - Thermo-Hydro-Electric (T-H-E) therapy
  - Pain-relief mobilization
  - Special procedures for pain relief
- Treatment to increase mobility
  - Soft tissue mobilization
  - Passive soft tissue mobilization
  - Active-facilitated soft tissue mobilization
  - Muscle stretching principles
  - Joint mobilization to increase mobility
  - Neural tissue mobilization
- Specialized exercise to increase mobility
- Treatment to limit movement
- To inform, instruct and train
- Research.

SPINAL SYNDROMES

- Notes on spinal syndromes
- Cervical syndromes
- Thoracic syndromes
- Lumbar syndromes
- Neurologic evaluation of nerve root syndromes
- Sensory innervation of the skin
- Sensory innervation of deep structures
- Motor innervation
- Common nerve root syndromes.

MANUAL THERAPY ASSESSMENT

- The Maitland's and Mulligan concept
- Subjective examination
- Physical examination
- Examination of the temporomandibular joint
- Examination of the upper cervical spine
- Examination of the cervicothoracic spine
- Examination of the thoracic spine
- Examination of the lumbar spine.

THE SUBJECTIVE EXAMINATION STEP BY STEP

- Introduction
- Body chart
- Behavior of symptoms

- Special questions
- History of the present condition (HPC)
- Past medical history (PM H)
- Social and family history (SH, FH)
- Plan of the physical examination
- Case scenarios
- Counterfeit clinical presentations.

PHYSICAL EXAMINATION STEP- BY-STEP

- Introduction
- Observation
- Joint tests
- Muscle tests
- Neurological tests
- Special tests
- Functional ability
- Palpation
- Accessory movements
- Completion of the physical examination.

TECHNIQUES

TECHNIQUE PRINCIPLES

- Learning manual techniques
- Applying manual techniques
- Objective
- Starting position
  - Patient's position
  - Therapist's position
- Hand placement and fixation/stabilization
  - Grip
  - Therapist 's stable hand
  - Therapist's moving hand
- Procedure
  - Joint pre-positioning
  - Mobilization technique
  - Symbols
- Recording
- Identifying an intervertebral segment
- The Star Diagram.

PELVIS

- Functional anatomy and movement
- Notes on evaluation and treatment
- Pelvis tests and mobilizations.

LUMBAR SPINE

- Functional anatomy and movement
- Notes on evaluation and treatment
- Lumbar tests and mobilizations

THORACIC SPINE AND RIBS

- Functional anatomy and movement
- Notes on evaluation and treatment
- Thoracic tests and mobilizations.

CERVICAL SPINE

- Functional anatomy and movement
- Notes on evaluation and treatment
- Cervical tests and mobilizations.

UPPER CERVICAL SPINE

- Functional anatomy and movement
- Notes on evaluation and treatment
- Upper cervical tests and mobilizations.

JAW

- Functional anatomy and movement
- Jaw examination scheme
- Jaw tests and mobilizations.

SPINAL MOBILIZATIONS
THE CERVICAL AND UPPER THORACIC SPINES

- NAGS
- REVERSE NAGS
- SNAGS
- SELF SNAGS
- Spinal Mobilization with arm Movement
- Other mobilization with movement techniques (MWMS) for the Cervical and Upper Thoracic Spines.

THE UPPER CERVICAL SPINE SPECIAL TECHNIQUES

- The acute Wry Neck
- Headaches
- Vertigo, Nausea and other vertebral artery Signs.

THE LUMBAR SPINE

- SNAGS
- SELF SNAGS.

THE SACROILIAC JOINTS (S/I) JOINTS
THE THORACIC SPINE
THE RIB CAGE
CONCLUSION

INTEGRATIVE MANUAL THERAPY

- Postural Compensations of the spine
- Muscle Energy and 'Beyond' Technique for the spine
- Treatment of spine Hypertonicity for Synergic Pattern
- Release with Strain and Counter strain Technique
- Myofascial Release
- Tendon Release Therapy for Treatment of Tendon Tissue Tension with Advanced Strain and Counter strain Technique
- Ligaments: a Tensile Force Guidance System: Treatment with Ligament Fiber Therapy
- Procedures and Protocols to correct spinal Dysfunction with Integrative Manual Therapy.

PRACTICAL/CLINICAL TRAINING:

In the laboratory sessions, Supervised evaluation and manual therapy treatment techniques will be demonstrated and practiced, including joint and soft-tissue mobilization, manipulations, and posture and movement retraining in the physiotherapy clinic/Ward and Orthopaedic clinic/Ward, Indoor as well as outdoor. Various reflective case studies related to manual therapy of the spine and TM joint will be assigned to the students.

Note:
The students are expected to make a record of his/her achievements in the log book. The log book is a collection of evidence that learning has taken place. It is a reflective record of achievements. The log book shall also contain a record of the procedures which student would have performed/observed.

RECOMMENDED TEXT BOOKS:

1. *Manual Mobilization of the Joints The Kaltenborn Method of Joint. Examination and Treatment Volume I, The Extremities* By: Freddy M. Kaltenbom in collaboration with Olaf Evjenth, Traudi Baldauf. Kaltenbom, Dennis Morgan, and Eileen Vollowitz ,OPTP Minneapolis, Minnesota, USA.
2. *Manual Therapy* By: Ola Grimsby, the Ola Grimsby institute San Diego.
3. *Integrative Manual therapy for the upper and lower extremities* By: Sharon weiselfish, North Atlantic books Berkeley, California.
4. *Orthopedic manual therapy an evidence-based approach* by: Chad Cook.
5. *Orthopaedic Manual Therapy Diagnosis Spine and Temporomandibular Joints* By: Aad van der.
6. *Translatoric Spinal Manipulation* By: John R. Krauss, Olaf Evjenth, and Doug Creighton John R. Krauss A Lakeview Media L. L.C. Publication.

7. *Neuromusculoskeletal Examination and Assessment A Handbook for Therapists.*
8. By: Nicola J Petty, Ann P Moore &G D Maitland, Second Edition Churchill Livingstone.
9. *Myofascial Manipulation Theory and Clinical Application*, Second Edition By: Robert I. Cantu, Alan J. Grodin an Aspen Publication Aspen Publishers, Inc. Gaithersburg, Maryland 2001.
10. *Maitland's Vertebral Manipulation* Seventh Edition By: Geoffrey D. Maitland.
11. *Musculoskeletal manual medicine, diagnosis and treatment by* Jiri Dovark, Vaclav Dovark, Werneir Schneider etc.
12. *Manual therapy, NAGS, SNAGS, MWMS etc* by Brian R Mulligan fifth edition.

TEACHING METHODOLOGY & COMMUNITY MEDICINE

CREDIT HOIURS 3 (3-0)

COURSE DESCRIPTION:

The course is organized to introduce the concept of health care and management issues in Health Services. It will help them in assuming a leadership role in their profession and assume the responsibility of guidance. It will help them assume wider responsibilities at all levels of health services. It will help them in improving their performance through better understanding of the total function of the institution.

COURSE OUTLINE:

TEACHING METHODOLOGY

- Types of health services, public, private, scientific, traditional health system.
- Organization of public services in health, central, provincial and local levels.
- Burden of disease, concept of health needs for care,
- Levels of health care, primary, secondary and tertiary,
- Planning of health services,
- Organization of health services,
- Implementation and evaluation of health services,
- Management of resources in health services,
- Financial management.
- Health education and social cultural concept in health,
- Ethics in Health Services.
- Theories of learning facilitations
- Cognitive, Psychomotor domain & effective domain
- Bloom taxonomy.

COMMUNITY MEDICINE

COURSE DESCRIPTION:

This course is designed for the physiotherapists in order to develop strong knowledge background regarding the community health and well being. It also gives knowledge about issues in community health and policies and procedures for their effective management.

COURSE OUTLINE:

INTRODUCTION

- History of Community Medicine
- Definition, concept of Health & illness of diseases
- Natural History of diseases, levels & prevention.

ENVIRONMENTAL SANITATION & MEDICAL ENTOMOLOGY

- water
- waste disposal
- Environmental problems & pollution.

GENETICS

- Prevention of genetic diseases
- Genetic counseling.

GENERAL EPIDEMIOLOGY
DESCRIPTIVE EPIDEMIOLOGY

- Time
- Place
- Person.

ANALYTICAL EPIDEMIOLOGY

- Case control
- Cohort studies.

EXPERIMENTAL EPIDEMIOLOGY RANDOMIZED CONTROL TRIAL

SYSTEMIC EPIDEMIOLOGY

- Vector borne diseases
- Water borne diseases
- Air born diseases
- Contact diseases
- Diseases of major public health and its importance alongwith national health programmes wherever Applicable.

NON-COMMUNICABLE DISEASES

- Diabetes
- Hypertension
- Heart diseases
- Blindness

- Accidents
- Geriatric problems.

OCCUPATIONAL HEALTH PROBLEMS

- M.C.H. and family welfare Programmes
- Health care delivery in the community
- National Health Policy
- National Health programmes including
- Rehabilitation, Evaluation of Health
- Programmes, Health Planning Organization.

STRUCTURE OF HEALTH CARE SYSTEM IN THE COUNTRY

- P. H. C. district level
- State level and central level.
- P. H. C. Organization and Function
- Role of Non-Governmental Organization.

HEALTH EDUCATION

- Principles of Health Promotion
- Methods, approaches and media for
- I. E. C (Information, Education & Communication)
- Medical and Health/Information system
- Mental Health
- Nutrition.

RECOMMENDED TEXT BOOKS:

1. Textbooks of Community Medicine, by Prof. H. A. Siddique (2nd Edition).
2. Parks text book of preventive & social medicine –K Park.

SUPERVISED CLINICAL PRACTICE - II

CREDIT HOURS 3 (0-3)

SYSTEM REVIEW

SEMESTER	SUPERVISION	FOCUS	WARDS	COMPETENCIES
6	SUPERVISED BY TRAINED PT	SYSTEMS REVIEW	All wards	AS LISTED BELOW

COURSE DESCRIPTION:

During this supervised clinical practice, students are responsible for learning the skills of systems review and validate the need for physical therapy services. Students learn to objectively review each system under the supervision of trained physical therapists. Students become familiar with performance of these skills in all settings (inpatient and outpatient) as well as on all types of patients (surgical, non-surgical, pediatric, geriatric, etc.) Student is required to keep a performance record of all listed competencies

and successfully perform on real patients during the final evaluation of the course.

CLINICAL COMPETENCIES

- Perform review of systems to determine the need for referral or for physical therapy services.
- Systems review screening includes the following.

GENERAL HEALTH CONDITION (GHC)

- Fatigue
- Malaise
- Fever/chills/sweats
- Nausea/vomiting
- Dizziness/lightheadedness
- Unexplained weight change
- Numbness/Paresthesia
- Weakness
- Mentation/cognition.

CARDIOVASCULAR SYSTEM (CVS)

- Dyspnea
- Orthopnea
- Palpitations
- Pain/sweats
- Syncope
- Peripheral edema
- Cough.

PULMONARY SYSTEM (PS)

- Dyspnea
- Onset of cough
- Change in cough
- Sputum
- Hemoptysis
- Clubbing of nails
- Stridor
- Wheezing.

GASTROINTESTINAL SYSTEM (GIS)

- Difficulty with swallowing
- Heartburn, indigestion
- Change in appetite
- Change in bowel function

URINARY SYSTEM (US)

- Frequency
- Urgency
- Incontinence.

GENITAL REPRODUCTIVE SYSTEM (GRS)

MALE

- Describe any sexual dysfunction, difficulties, or concerns.

FEMALE

- Describe any sexual or menstrual dysfunction, difficulties, or problems.

RECOGNITION OF RED AND YELLOW FLAGS

- Initiate referral when positive signs and symptoms identified in the review of systems are beyond the specific skills or expertise of the physical therapist or beyond the scope of physical therapist practice
- Consult additional resources, as needed, including other physical therapists, evidence-based literature, other health care professionals, and community resources
- Screen for physical, sexual, and psychological abuse.

CARDIOVASCULAR AND PULMONARY SYSTEMS

- Conduct a systems review for screening of the cardiovascular and pulmonary system (heart rate and rhythm, respiratory rate, blood pressure, edema)
- Read a single lead EKG.

INTEGUMENTARY SYSTEM

- Conduct a systems review for screening of the integumentary system, the assessment of pliability (texture), presence of scar formation, skin color, and skin integrity.

MUSCULOSKELETAL SYSTEM

- Conduct a systems review for screening of musculoskeletal system, the assessment of gross symmetry, gross range of motion, gross strength, height and weight.

NEUROLOGICAL SYSTEM

- Conduct a systems review for screening of the neuromuscular system, a general assessment of gross coordinated movement (eg, balance, gait, locomotion, transfers, and transitions) and motor function (motor control and motor learning).
- Documentation of all listed competencies in SOAP notes format