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Advanced Certificate Programme in Physiotherapy in Neurological Sciences

Nomenclature

The proposed nomenclature for the training programme in Physiotherapy is 'Advanced Certificate Programme in Physiotherapy in Neurological Sciences (ACP-PN)'.

Number of seats

Two each year

Duration of Programmes

One calendar year from January

Eligibility for admission

1. A bachelor's degree in Physiotherapy from a recognized University.

Admission will be through an entrance examination conducted in the SCTIMST.

Scheme of Training

Selected candidates shall be attached to Department of Physical Medicine & Rehabilitation. Training focuses on enabling the candidate acquire post graduate level knowledge and skills in newer techniques and methods of physiotherapy management. They will participate in all assigned activities of the department including ward rounds, seminars, projects and rotation duties. General postings and training will include Physical Medicine & Rehabilitation, Neurology & Neurosurgery Wards, OPDs, Intensive Care & High Dependency Care.

Syllabus

I. General

- Unit – 1: Communication & Behaviour: Skills with respect to professional work and in documentation, Gender and culture sensitive behavior
- Unit – 2: Biostatistics & Research Methodology
- Unit – 3: Anatomy of the Brain, spinal cord, peripheral nervous system, Anatomy of Bones and Joints, Major muscles and their actions, Basics of Biomechanics
- Unit – 4: Types of exercises, Physiological effects of exercises, Relaxation, Muscle metabolism, Neural control of muscle action, muscle contraction
- Unit – 5: Evidence-based Physiotherapy, Outcome measures in physiotherapy appropriate to neurologic illnesses, Principles of rehabilitation, Concepts of Disablement, ADL and IADL; Goals and goal-setting

II. Physiotherapy in Neurologic Sciences

- Physiotherapy evaluation of neurologic dysfunction,
- Impairment, disability and handicap; New ICF classification
- Understanding medical and surgical neurologic conditions; their prognoses and opportunities for intervention
- Planning Physiotherapy interventions, setting goals, assessing outcomes
- Techniques of physiotherapy: Principles and Practice

- Motor Re-education
- Proprioceptive neuromuscular facilitation
- Neuro-Developmental Therapy
- Sensory Integration
- Strengthening and reconditioning and others
- Modalities used in physiotherapy in neurologic conditions
- Unweighting systems in neurologic diseases
- Treadmills in neurologic disorders
- Functional Electrical Stimulation
- Biofeedback systems
- Balance training system
- Dynamic Stair Trainer and applications
- Principles of orthoses, training clients in the uses of orthoses
- Wheelchairs and assistive devices; applications
- Basics of Nerve conduction studies, EMG
- Documentation, Record keeping

III. Project: Candidates will submit a project related to their chosen subject

Assessment

1. The candidates will maintain a log-book (a copy of report of all work and interventions performed) which will be periodically assessed by the course instructors and the head of department. The HOD of PMR will certify satisfactory completion or otherwise of the work performed by the candidate. The logbook will be forwarded to the Registrar as per Institute norms.
2. The project submitted by the candidates will be assessed by a panel. Approval of the project is essential for satisfactory completion of the Internship.

Advanced Certificate Programme in Physiotherapy in Cardiovascular Sciences

Nomenclature

The proposed nomenclature for the training programme in Physiotherapy is 'Advanced Certificate Programme in Physiotherapy in Cardiovascular Sciences (ACP-PC)'.

Number of seats

Two each year

Duration of Programmes

One calendar year from January

Eligibility for admission

1. A bachelor's degree in Physiotherapy from a recognized University.

Admission will be through an entrance examination conducted in the SCTIMST.

Scheme of Training

Selected candidates shall be attached to Department of Physical Medicine & Rehabilitation. Training focuses on enabling the candidate acquire post graduate level knowledge and skills in newer techniques and methods of physiotherapy management. They will participate in all assigned activities of the department including ward rounds, seminars, projects and rotation duties.

Syllabus

I. General

- II. Unit – 1: Communication & Behaviour: Skills with respect to professional work and in documentation, Gender and culture sensitive behaviour
- III. Unit – 2: Biostatistics & Research Methodology
- IV. Unit – 3: Anatomy of the Heart and Cardiovascular system. Bones and Joints, Major muscles and their actions, Basics of Biomechanics
- V. Unit – 4: Types of exercises, Physiological effects of exercises, Relaxation, Muscle metabolism, Aerobic and anaerobic activity, muscle contraction
- VI. Unit – 5: Evidence-based Physiotherapy, Outcome measures in physiotherapy appropriate to neurologic illnesses, Principles of rehabilitation, Concepts of Disablement, Activities of Daily Living and Instrumental Activities of Daily Living; Goals and goal-setting

II. Physiotherapy in Neurologic Sciences

- Physiotherapy evaluation of cardiovascular dysfunction
- Impairment, disability and handicap, ICF classification
- Medical and surgical cardiovascular conditions; their prognoses and physiotherapy needs
- Planning Physiotherapy interventions, setting goals and assessing outcomes
- Setting exercise parameters, safe limits in different cardiovascular diseases
- Exercise protocols and outcome measurements

- Physiotherapy intervention in DVT prevention
- Chest physiotherapy
- Skills in managing patients/ clients in the ICU, wards, clinic or OPD
- Participation in cardiovascular rehabilitation team; physiotherapy interventions in lifestyle management through evidence-based approaches
- Techniques of physiotherapy for cardiovascular diseases
- Motor Re-education
- Proprioceptive neuromuscular facilitation
- Muscle Energy Technique and others
- Modalities for pain relief, TENS, Ultrasound therapy, Interferential Therapy, Electrical Stimulations
- Treadmills, Exercises on treadmills and other exercise devices
- Cardiovascular fitness training techniques, equipment and design

III. **Project:** Candidates will submit a project related to their chosen subject

Assessment

1. The candidates will maintain a log-book (a copy of report of all work and interventions performed) which will be periodically assessed by the course instructors and the head of department. The HOD will certify satisfactory completion or otherwise of the work performed by the candidate. The logbook will be forwarded to the Registrar as per Institute norms.
2. The project submitted by the candidates will be assessed by a panel. Approval of the project is essential for satisfactory completion of the Internship.