

**SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES &
TECHNOLOGY, TRIVANRUM -11**

I. Name of the Programme: Diploma in Neuronursing

II. Objectives

Upon successful completion of the programme it is expected that the candidates will

1. Demonstrate competency in providing quality care to patients with Neurological and Neurosurgical conditions in different settings.
2. Demonstrate skill in clinical teaching and as ICU managers.
3. Integrate relevant research findings into neuronursing practice.

III. Selection Criteria

Eligibility:

- (a) G.N.M or B.Sc Nursing
- (b) For G.N.M candidates, one year experience as bedside nurse after passing the Course.
- (c) Professionally registered as a nurse by Indian Nursing Council or any recognized State Nursing Councils of India.

Age limit:

Upper age limit is 35 years, relaxable by 3 years for OBC candidates, 5 years for SC/ST, sponsored candidates and for qualified ex-service personnel with a service of not less than 5 years.

Selection:

Selection will be made strictly in order of merit on the basis of percentage of marks obtained in the Common Entrance examination, Objective Structured Clinical Examination and interview to be held at the Institute.

IV. Number of seats

10 per year + 1 sponsored candidate if they meet the selection criteria and sponsored by Government/Governmental agencies or Universities.

V. Organisation of the Programme & Key Components

The following factors have been identified as the key components of the programme:

1. Structured programme curriculum
2. Evaluation
 - i. Comprehensive documentation of academic activities of candidate
 - ii. Comprehensive evaluation of candidate
 - iii. Periodic review and appraisal
3. Candidate's feedback

A. Duration

The course covers a period of 2 years (24 months). Theory and practical experience are integrated during the first year. The second year is meant to provide advanced professional experience enriched with academic activities.

B. Time Schedule for First Year and Second year

(Clinical 30 hrs/week, Academic activities -12 hrs/ week)

First Year:

Theory	380 Hrs
Clinical	1320 hrs (Integrated)
Total	1700 Hrs

Second Year

Academic activities	200
Clinical	2400
Total	2600 Hrs

C. Course of Studies

Distribution of hours and subject areas are as follows

		Hrs
1	Nursing Foundations	55
2	Neuronursing (Medical)	100
3	Neuronursing (Surgical)	100
4	Nursing Education	50
5	Nursing Administration	25
6	Nursing Research & Statistics	50
	Total	380

D. Clinical Rotation

First year (30hrs /week)

		Hrs	Weeks of posting
1	Neurosurgical Intensive Care Unit	300	10
2	Neuromedical Intensive care unit	300	10
3	Neuro Radiology Lab	60	2
4	Noninvasive diagnostic Labs+ Outpatient departments	90	3
5	Medical/Surgical Wards/Epilepsy ward	190	6
6	Stroke ICU + Radiology ICU	200	7
7	Neuro OT	90	3
8	Orientation, Examination	90	3
	Total	1320	44 weeks

Second Year

(Clinical 40 hrs/week, Academic activities 4hrs / week)

1. Academic Activities + exam	200 Hrs
2. Clinical	2400 Hrs
Total	2600 Hrs

		Hrs	Weeks of posting
1	Neurosurgical Intensive Care Unit	320	8
2	Neuromedical Intensive Care Unit+ Stroke ICU	1120	14
3	Interventional Radiology ICU+ Epilepsy ward	320	6
5	Wards(Neurosurgery, Neuromedical)	400	10
6	Neuroradiology lab	160	4
7	NeuroOT(Adult and Pediatric)	400	10
	Total	2400	52 weeks

VI. Essential Clinical/Practical activities

First Year

- Patient care assignment
- Writing Nursing care plans
- Writing Case studies
- Case presentations
- Writing Observation records

- Planned Health teaching
- Preparing a Drug file
- Individual project work
- Completing Practical Manual
- Conducting Bedside rounds
- Practice teaching
- Developing supervisory skills
- Practice in clinical evaluation techniques

Second year

The second year students will utilize their expertise in

- mentoring the first year students,
- clinical skill training of first year students
- conducting clinical presentations/Inservice education
- conducting journal club
- conducting seminars
- Patient education
- Assisting for sophisticated investigations/surgeries -
- publishing nursing articles in journals
- participating in presenting papers in conferences and
- Maintaining a log book / file of academic activities.

VII. Examination Scheme

First Year- INTERNAL ASSESSMENT- TOTAL 250 marks

Item	Marks
Practical Records	50
Assignments(Clinical)	50
Clinical Performance	100
Internal Theory exam	50
TOTAL	250

First Year- EXTERNAL ASSESSMENT (theory) (200 marks)

A. Theory External Marks

First Year

Paper I Neuronursing Medical (3hrs) 100

Paper II Neuronursing Surgical (3 hrs) 100

SECOND YEAR

INTERNAL ASSESSMENT (TOTAL 300 marks)

Item	Marks
Classroom seminars	50
Research project	50
Practicals & Viva	50
Internal exam	50
Clinical performance	100
TOTAL	300

No external exam in second year.

C. Conditions for admission to Examination

The candidate

- Should have 85% attendance to get eligibility to appear for the Examination.
- Should have completed the assignments successfully.

The external examination will be at the end of one year as per present protocol. But the candidates who fail in the Examination may be allowed to continue the second year of the programme and appear for the supplementary examination at second year.

VIII. Standard of Passing

A candidate must obtain 50% marks in Theory papers/Internal assessment and in the aggregate to be declared successful.

IX. Certification

As per Institute format

G. Attendance : An attendance of 85% is compulsory.

H. Discontinuation : Provision for discontinuation of the programme may be allowed on payment of six months' stipend.

Diploma in Neuronursing

Course of Studies

1. Nursing Foundations	55 Hrs
2. Neuro Nursing Medical;	100Hrs
3. NeuroNursing Surgical:	100 Hrs
4. Nursing Education:	50 Hrs
5. Nursing Administration:	25Hrs.
6. Nursing research &Statistics	50Hrs
Total	380Hrs

1. Nursing Foundations - 55 hrs.

Unit 1. The Nursing Process:-

Concept, elements, and Nursing care plans, Documentation, Quality Patient care

Unit 2. Health promotion:-

Holistic approach of patient management, Emerging Trends - Speciality nursing, Healthy lifestyle

Unit 3. Outpatient and emergency management: –

Out patient management, Medico legal cases and brought dead, management of accidents and trauma, head injury, Disaster preparation and management, Cardiopulmonary resuscitation, medical and surgical emergencies.

Unit 4. Hospital environment:-

Therapeutic environment, Ward hazards, Hospital acquired infection, Infection control, Biomedical waste management, Stress management and crisis intervention, Ethical and legal issues related to patient care, Consumer protection Act

Unit 5. Communication:-

Process, types, channels of communication, barriers, Improving effective communication, public relations in hospitals

2.Neuro Nursing Medical -100 hrs

Unit I. Overview of Neuroanatomy and Neuro physiology

- Embryonic development of the nervous system.
- Cranial and spinal bones, meninges.
- Cells of the nervous system.
- Impulse conduction.
- Structural divisions and functions of the nervous system
- Brain and spinal cord.
- Peripheral nervous system.
- Autonomic nervous system.
- Cranial nerves.
- Cerebro spinal fluid.
- Cerebral circulation.
- Blood – Brain – Barrier.

Unit 2. Assessment of Patients with Neurologic Disorders

- Nursing History
- The Neurological Physical examination.
- Invasive and non-invasive diagnostic procedures.
 - X – ray studies.
 - CT Scan, MRI Scan, Radionuclide imaging.
 - Electro Encephalography, Video EEG, Intra cranial electrode monitoring, Neuro Psychological tests.
 - Lumbar puncture and CSF studies.
 - Evoked potentials – Visual, auditory, somato sensory

- Electro myography and nerve conduction studies.
- Testing of the special senses.
- Digital Subtraction Angiography.
- Laboratory blood tests

Unit 3. The Neuro Nurse

- Principles and organization of Neuro ICU.
- Current concepts of treatment.
- Role of a Nurse in the Neuro Intensive Care Unit
- Hemodynamic monitoring
- Intra cranial pressure monitoring.

Unit 4. Nursing Process Pertaining to Infections of the Nervous system

- Meningitis
- Encephalitis
- Parasitic Infections - Neurocysticercosis
- Neurosyphilis
- AIDS and the Nervous system

Unit 5. Nursing Process Pertaining to Cerebrovascular Diseases

- Ischemic Cerebrovascular Disease
- Intracerebral Hemorrhage

Unit 6. Nursing Process Pertaining to Degenerative Diseases

- Alzheimer's disease
- Multiple sclerosis
- Parkinson's Disease
- Wilson's disease
- Dementia
- Motor Neuron Diseases

Unit 7. Nursing Process Pertaining to Autoimmune/Neuromuscular Disorders

- Guillain Barre Syndrome
- Myasthenia gravis
- Muscular Dystrophies

Unit 8. Nursing Process Pertaining to Other Pathologic states

- Coma states
- Pain and pain Syndromes
- Seizure disorders
- Normal pressure Hydrocephalus
- Mental retardation
- Neuromedical emergencies
- Drug therapy in neurologic disorders

Unit 9. Special Consideration in Neurological nursing

- Discharge plan and Home care.
- Living with a neurological disorder.
- Problems experienced by patients, Rehabilitation
- Dementia, Pain, Dysphagia, Gait disorders, Sensory perceptual deficits, Impairment of speech and language and problems with sexuality

3. Neuronursing Surgical - 100 Hrs

Unit I. Overview of Neuroanatomy and Neuro physiology - Review

- Embryonic development of the nervous system.
- Cranial and spinal bones, meninges.
- Cells of the nervous system.
- Impulse conduction.
- Structural divisions and functions of the nervous system
- Brain and spinal cord.
- Peripheral nervous system.
- Autonomic nervous system.
- Cranial nerves.

- Cerebro spinal fluid.
- Cerebral circulation.
- Blood – Brain – Barrier.

Unit 2. Assessment of Patients with Neurosurgical Problems

- Nursing History
- The Neurological Physical examination.
- Invasive and non-invasive diagnostic procedures.
 - X – ray studies.
 - CT Scan, MRI Scan, Radionuclide imaging.
 - Electro Encephalography, Video EEG, Intra cranial electrode monitoring, Neuro Psychological tests.
 - Evoked potentials – Visual, auditory, somato sensory
 - Testing of the special senses.
 - Digital Subtraction Angiography.
 - Laboratory blood tests

Unit 3. Nursing Process Pertaining to Developmental Anomalies

- Hydrocephalus
- Craniostenosis

Unit 4. Nursing Process Pertaining to Patients with trauma to the Neurological system

- Multiple Trauma.
- Craniocerebral Trauma.
- Vertebral and Spinal cord Trauma.
- Back pain and Intervertebral Disc Prolapse
- Peripheral Nerve Trauma.

Unit 5. Nursing Process Pertaining to Patients with Cerebrovascular Diseases

- Cerebral Aneurysms and subarachnoid hemorrhage
- Arteriovenous Malformations

Unit 6. Nursing Process Pertaining to Other Pathologic states

- Increased Intracranial Pressure
- Cerebral Edema

Unit 7. Nursing Process Pertaining to Infections of the Nervous system

- Brain abscess
- CSF Leak

Unit 8. Nursing Process Pertaining to Patients undergoing Neurosurgical and Interventional Procedures

- Intra cranial Tumors
- Brain Tumors in children
- Spinal cord tumors
- Craniovertebral anomalies.
- Neurosurgical procedures and other interventional procedures
 - Embolisation, Other Neuro radiological procedures
 - Stereotactic Surgery
 - Neuroendoscopy
 - Radio surgery
 - Deep Brain Stimulation
 - Surgery for Intractable Epilepsy

Unit 9. Special Consideration in Neurosurgical nursing

- Discharge plan and Home care.
- Post operative Problems experienced by patients, Rehabilitation
- Psychosocial Problems, Pain, Dysphagia, Gait disorders, Sensory perceptual deficits, Impairment of speech and language and problems with sexuality.
- Radiotherapy, Improving coping strategies

METHOD OF EVALUATION

Sessional tests, Written assignments, Assessment of seminars and project, Term paper, Clinical presentation, Evaluation of clinical performance, Practical examinations and viva voce.

NURSING EDUCATION - 50 Hrs

Objective:

To acquire knowledge about teaching and learning so as to assume the responsibility of an educator and mentor in critical care units.

Unit 1. Introduction to teaching

- Teaching and Learning
- Qualities of a teacher
- Principles of teaching
- Methods of teaching

Unit 2. Introduction to Learning

- Meaning, Learning Process
- Principles and characteristics of learning
- Factors influencing learning
- Learning Theories

Unit 3. Lesson Planning

- Principles
- Essentials of a good lesson plan
- AV aids in teaching – preparation and use

Unit 4. Library Science

- How to use a library
- Classification and Cataloguing
- Bibliography
- Computerized medical information system

Unit 5. Evaluation

- Meaning , Purpose, Planning, Problems
- Nature of instruments used to evaluate
- Advantages & Disadvantages of each instrument.

Practical:

Each student will conduct a minimum of three practice teaching in the class, and three supervised clinical presentations using different methods of teaching.

NURSING ADMINISTRATION - 25 HRS

Objective:

To acquire knowledge about administration so as to assume the responsibility of managing critical care units

Unit 1. Introduction

Current trends in administration of nursing service
Philosophy aims and objectives of nursing administration.
Application of principles and techniques of administration to nursing service,
Planning and organization of hospital nursing services
Job Description and specification

Unit 2. Nurse as a Manager

Concept of Supervision and management
Qualities of a Supervisor
Principles of management and methods of supervision
Responsibilities of nurse manager in Critical Care Units.

Unit 3. Role in patient care

Planning Care
Maintaining therapeutic environment
Supplies and equipment
Record and Reports
Assigning duties & responsibilities
Evaluation of Patient care

Unit 4 Role as an educator

Planning and conducting Clinical Teaching
Supervising members of Health team

Unit 5. Role as an administrator

Delegation of responsibilities

Performance appraisal
Planning, Research & Project work assignments
Co- ordination & Co- operation

6. NURSING RESEARCH & STATISTICS - 50HRS

Objective:

To apply the basic concepts of research methodology in professional practice through project studies, and publishing research findings.

Unit 1. Introduction to research and nursing research:

Meaning of research
Importance of research and Nursing research
Research Process
Scope of research in nursing
Characteristics of Research
Qualities of Research
Classification of Research
Ethical consideration of Research
Developing enquiring mind.

Unit 2. Research Problem and Research Questions:

Identification of problems, sources and selection of problem
Different approaches in research problems
Statement of problem and objectives
Review of literature
Operational definitions, Variables, Assumptions, Hypothesis
Populations, Sample and sampling techniques
Delimitations

Unit 3. Method of Data collection:

Techniques

Questioning, Interview

Observation

Tool

Interview schedule

Questionnaire

Observation checklist

Rating scale

Preparation of research tool

Validity and Reliability of tool

Pilot Study

Process of Data collection

Unit 4. Analysis and interpretation of data:

Use of statistics

Measures of central tendency – Mean, Media and Mode.

Use of descriptive statistics – Frequency

Use of tables and graphs – Histogram, pie chart, bar graph, frequency graph.

Interpretation of data

Unit 5. Writing of research report:

Main findings

Conclusions

Implications in Nursing Education, Nursing service and Nursing Administration.

Recommendations

Abstract

References

Publication of research findings

Methods of Teaching

Lecturers, Discussion, Demonstration, Seminars, Problem based learning, Nursing process application, Clinical Teaching.

Method of Evaluation

Sessional tests, Written assignments, Assessment of seminars and project, Term paper, Clinical presentation, Evaluation of clinical performance, Practical examinations and viva voce.

Practical:

Each student will undertake a small project in the clinical area and submit typed copy of the project report during first year, before October 31st. An article based on the project work needs to be prepared and sent for publishing in a professional journal during second year.

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2. Sole M L, Klein D G, Moseley M J. Introduction to Critical Care Nursing. Sixth Edition. Missouri: Elsevier; 2013.
3. Schell H M, Puntillo K A. Critical Care Nursing Secrets. Second Edition. Missouri: Mosby Elsevier; 2006.

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1. Gulanick Meg et al. Nursing Care Plans, Nursing Diagnosis and Interventions (5th ed). St.Louis: Mosby, 2003.
2. Lynda, Juall Carpenito. Nursing Diagnosis-Application to clinical Practice(9th ed) . Philadelphia: Lippincott; 2002.

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1. Huber, Diane. Leadership and Nursing care Management (2nd ed). Philadelphia: WB Saunders Co; 2000.

2. Yoder-wise, Patricia S. leading and Managing in Nursing (3rd ed). St.Louis: Mosby, 2003.
3. Best Practices – A Guide to Excellence in Nursing Care. Philadelphia: Lippincott William and Wilkins, 2002.

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1. Polit, Denis F Cheryl Tatano Bek and Bernadette, P Hungler. Essentials of Nursing Research Methods, Appraisal and utilization (5th Ed). Philadelphia: Lippincott; 2001.
2. Stewart-Amidei Chris and Joyce A Kunkel. AANN's Neuroscience Nursing: Human Responses to Neurologic Dysfunction (2nd Ed). Philadelphia: WB Saunders Co; 2001.

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1. Aggarwal JC. Essentials of Educational Technology: Teaching Learning Innovations in Education. New Delhi: Vikas Publishing House Pvt Ltd. 1996.
2. Bastable, Susan b. Nurse as Educator (2nd ed). Boston: Jones and Bartlett Publishers, 2003.

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4. Journal of Perianaesthesia Nursing
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