

SYLLABUS OF POST BASIC DIPLOMA IN NEONATAL NURSING

Number of Courses/Papers and Total Number of Theory and Practical Hours Post Basic Diploma in Neonatal Nursing

#	Course	Theory hours	Practical hours
1	Clinical Nursing-I (including Foundation Course - Neonatal Nursing)	155	1280
2	Clinical Nursing-II (Neonatal Nursing)	155	
3	Supervision & Management, Clinical Teaching, Elementary Research & Statistics (Neonatal Nursing)		
i)	Supervision & Management	30	
ii)	Clinical Teaching	30	
iii)	Elementary Research & Statistics	30	
4	Internship		160
	TOTAL	400	1440

**POST-BASIC DIPLOMA NEONATAL NURSING
CLINICAL NURSING – I (NEONATAL NURSING)
TOTAL THEORY HOURS: 155 HOURS**

Description: This course is designed to develop an understanding of the principles of related biological and behavioural sciences, and obstetrical and neonatal nursing including neonatal resuscitation.

Objectives: At the end of the course the student will be able to:

1. Describe the principles of behavioral, biological and nursing sciences as applied to neonatal nursing.
2. Detect deviations in mothers and fetus from normal during antenatal and intranatal periods
3. Explain the development of the fetus from conception to term.
4. Describe the role of the nurse in prevention and management of high-risk neonates
5. Describe the concepts and principles of neonatal Nursing
6. Perform neonatal advanced life support
7. Describe levels of neonatal care and role of the nurse
8. Describe nursing process pertaining to neonatal care
9. Describe the physical, physiological and emotional changes occurring during antenatal intranatal and postnatal periods.

Unit I Psychology

10 hours

Review

- Individual differences
- Learning, Motivation, attention & perception
- Emotions
- Human behavior & needs in crisis
- Stress and coping in crisis situations
- Leadership
- Communication and IPR
- Counseling
- Attitude and humanizing care

Unit II Sociology

10 hours

Review

- a) Social organization & community resources
- b) Leadership roles in community
- c) Family and family relationships
- d) Socio-cultural influences on child rearing

Unit III Microbiology

10 hours

Review

- Immunity
- Infection
- Principles of asepsis, Sterilization & disinfection
- Diagnostic tests in Microbiology & related nurses' responsibility
- Standard safety measures & biomedical waste management

Unit IV Applied Anatomy and Physiology **20 hours**

Review

- Neurological system
- Respiratory system
- Cardiovascular system
- Gastrointestinal system
- Endocrine system
- Musculoskeletal system
- Genitourinary system
- Reproductive system
- Sensory organs

Unit V Embryology **10 hours**

Embryology

Development of fetus from conception to birth

Fetal circulation

Unit VI Pharmacology **10 hours**

Pharmacology

Review

- a) Pharmacokinetics
- b) Analgesics/Anti-inflammatory agents
- c) Antibiotics, antiseptics
- d) Drug reaction & toxicity
- e) Drugs used in neonatal resuscitation
- f) Blood and blood components
- g) Principles of drug administration, role of nurses and care of drugs

Unit VII Genetics **10 hours**

Genetics

- Meaning of genetics and heredity
- Mendelian laws of inheritance
- Genetic disorders
 - a) Chromosomal errors
 - b) Inborn errors of metabolism
 - c) Multifactorial disorders (sickle cell anemia, thalassemia, hemophilia)

Genetic counselling

Nurses' role in genetic counseling

Unit VIII Community Health **15 hours**

National health mission (specific to neonate)

Maternal and child health services and programs

- a) Organization of services
- b) Reproductive and Child Health program (RCH) (specific to neonate)
- c) National Immunization program (specific to neonate)

Demography and family welfare

- a) Definition, meaning, population trends—global and Indian

Health education: concepts, principles, approaches and methods

Integrated Management of Neonatal and Childhood Illnesses (IMNCI)

UNIT IX Obstetrics

20 hours

Obstetrics Review

- a) Pregnancy: Normal, High risk, Obstetrical disorders
- b) Labour: Normal, Abnormal
- c) Normal newborn – immediate care in labor ward
- d) High risk neonate – IUGR, post maturity, babies of high risk mothers
- e) Drugs used in obstetrics and their implications for the fetus/neonate

UNIT X Introduction to Neonatal Nursing

10 hours

Introduction to Neonatal nursing

- a) Definition, concepts and principles of neonatal nursing
- b) Definition of terms
- c) Risk factors for neonates in antenatal and intranatal period

Nursing process: Levels of neonatal care and role of nurse

UNIT XI Neonatal Basic/Advance Life Support

20 hours

Basic Life Support

Neonatal advance life support

- a) Routine care
- b) Initial steps
- c) Bag and mask ventilation
- d) Chest compression
- e) Endo-tracheal intubation
- f) Drugs

Unit XII Communication Skills

10 hours

Communication Skills & IPR

- a) Process & methods
- b) Establishing & maintaining good IPR & communication with family, staff and colleagues
- c) Multidisciplinary team & role of nurses
- d) Guidance and counseling

**POST-BASIC DIPLOMA NEONATAL NURSING
CLINICAL NURSING – II (NEONATAL NURSING)
TOTAL THEORY HOURS: 155 HOURS**

Description:

This course is designed to develop an understanding of the principles of nursing management of normal, high risk and sick neonates.

Objective:

At the end of the course the student will be able to:

1. Define concepts and trends in neonatal care.
2. Demonstrates an understanding feeding normal and low birth babies.
3. Develops policies and procedures for prevention of infections in NICU.
4. Identifies the reactions provides comfort to parents on admission of a baby to NICU.
5. Applies the nursing process while providing care to neonates admitted with medical and surgical problems.
6. Utilizes the principles of care in various investigations and procedures carried out on neonates.
7. Demonstrates increasing skills in communicating with parents and others, including breaking bad news.

UNIT I

HOURS: 15

Introduction

- Principles of neonatal nursing.
- Attributes of a neonatal nurse.
- Family centered care

Communicating with parent, family and health care team

Normal mother-baby relationship

Impact of birth of a sick/abnormal baby on the family

- Reaction of parents to the admission of their baby to NICU
- Grief process
- Breaking bad news
- Causes, effects & management of stress
- The personal & social problems of the family

UNIT II

HOURS: 20

Normal Newborn

- Definitions & terminology
- Examination of newborn
- Recognition of danger signs in a baby
- Common minor neonatal disorders

Care of normal newborn

- Immediate care
- Routine care – Transition care
- Daily care- Home Care

Physiological adaptation of the neonate
Thermoregulation & prevention of hypothermia
Kangaroo Mother Care (KMC)
Fluid & electrolyte balance

UNIT III

HOURS: 15

Neonatal Feeding

- Physiology of breast and milk secretion
- Principles of feeding & nutrition
- Feeding of normal babies
- Breast feeding & maintenance of lactation
- Human milk bank
- Managing breast feeding problems
- Feeding of LBW babies
- Artificial feeding – Enteral, Parenteral, Katori spoon, Gavage feeding
- Total Parental Nutrition(TPN)
- Fluid & electrolyte therapy

UNIT IV

HOURS: 10

Prevention of Infections

- Principles of prevention of infections in NICU
- Standard safety measures
- Hand washing
- Housekeeping routines
- Disinfections & sterilization

Biomedical waste management

UNIT V

HOURS: 10

Low birth weight baby (LBW)

- Type of LBW
- Etiology
- Identification of preterm & small for date babies
- Management: principles, thermoregulation, feeding, monitoring, transportation, management of specific illnesses

UNIT VI

HOURS: 30

Neonate transfer

Sick neonate

- Neonatal monitoring & observations
- Danger signs in newborns
- Respiratory problems; asphyxia neonatorum, apnea, respiratory distress syndrome (RDS), meconium aspiration syndrome, respiratory infections
- Neonatal sepsis
- Neonatal jaundice

- Convulsions & neurological disorders
- Metabolic disorders
- Necrotizing Enterocolitis (NEC)
- HIV: transmission & Anti Retroviral Therapy (ART) and management of neonates exposed to HIV
- Emergency treatment of neonatal problems

Palliative care of neonates

UNIT VII

HOURS: 25

Neonate with Surgical disorders

- Birth trauma
- Congenital malformations: identification & management
- Pre & post operative nursing care of a neonate with various surgical procedures: cleft lip & palate, Esophageal atresia and tracheo-esophageal fistula, congenital hypertrophic pyloric stenosis, Hirschsprungs disease, imperforate anus, recto- vaginal fistula (RVF), Spina bifida, meningo-myelocele, hydrocephalus, extrophy of bladder, congenital heart disease

UNIT VIII

HOURS: 30

Neonatal procedures

- Principles of Drugs therapy, administration of drugs, commonly used drugs
- Principles of Temperature maintenance & its clinical disorders
- Collection of specimens
- Assisting with procedures & therapies
- Use & maintenance of equipment
- Neonatal records
- Neonatal monitoring
- Admission & transfer of sick neonates

**POST BASIC DIPLOMA NEONATAL NURSING
SUPERVISION & MANAGEMENT, CLINICAL TEACHING, ELEMENTARY
RESEARCH & STATISTICS (NEONATAL NURSING)
TOTAL THEORY HOURS: 90**

Section-A	Supervision & Management
Section-B	Clinical Teaching
Section-C	Elementary Research & Statistics

Description: This course is designed to develop and understanding of the principles of supervision and management, clinical teaching and research.

Objectives: At the end of the course, the student will be able to:

1. Describe Professional trends
2. Describe role of nurse in management and supervision of nursing personnel in Neonatal care
3. Teach nurses and allied health workers about neonatal nursing
4. Describe research process and perform basic statistical tests
5. Plan and conduct research in neonatal nursing

Section-A Supervision & Management

Unit I Supervision & Management

20 hours

Management

- Definition & Principles
- Elements of management of neonatal care unit: Planning, Organizing, Staffing, Reporting, Recording, and Budgeting
- NICU management: - Time, material & personnel
- Layout and Design of NICU.
- Neonatal transport services
 - Planning of transport of neonates
 - Planning men and material for transportation
 - An ideal transport incubator

Clinical Supervision

- Introduction, definition and objectives of supervision
- Principles & Functions of supervision
- Qualities of supervisors
- Responsibilities of clinical supervisors
- Practice Standard of Neonatal Units
 - Policies and Procedures
 - Establishing Standing and Protocols
- Orientation programme for new recruits

Quality Assurance Program

- Nursing audit

Performance appraisal

- Principles of performance evaluation
- Tools of performance appraisal
 - Rating scales
 - Checklist

Peer review
Self appraisal

Staff development

- Introduction & purposes
- In-service education
- Continuing education

Unit II Professional trends

5 hours

- Introduction
- Code of Ethics, code of professional conduction and practice standards of Nursing in India
- Ethical issues in neonatal care unit
- Expanding role of the nurse: Specialist nurse, Nurse Practitioner etc.
- Professional organizations

Unit III Medico-Legal aspects

5 hours

- Legislations and regulations relation to neonatal care
- Consumer Protection Act (CPA)
- Negligence & Malpractice
- Legal responsibilities of nursing
 - Bill of rights of a patient
 - Case studies of judgment with regard to negligence of services in the Hospital
- Medico-Legal Aspects
 - Abandoned babies, transfer to orphanages, adoption services, loss of neonates from the unit, preservation of cadavers, transfer to various institutions
- Records and Reports
 - Role of the nurse in legal issues

Section-B Clinical Teaching

Unit IV Teaching learning process

30 hours

- Introduction and concepts
- Principles of teaching and learning
- Formulation of learning objectives
- Lesson Planning
- Teaching methods
 - Lecture
 - Demonstration, Simulation
 - Discussion
 - Clinical teaching methods
 - Micro teaching
 - Self learning
- Evaluation
- Assessment of Students
 - Purposes
 - Types
 - Steps
 - Tools for assessing knowledge, skill and attitude
- Use of media in teaching learning process

Section-C Elementary Research & Statistics

Unit V Research and Statistics

30 hours

Research

- Research and research process
- Types of Research
- Research Problem/Question
- Review of Literature
- Research approaches and designs
- Sampling
- Data collection: Tools and techniques
- Analysis and interpretation of data:
- Communication and utilization of research
- Research priorities in neonatal care

Statistics

- Sources and presentations of Data
 - Qualitative and quantitative
 - Tabulation; frequency distribution, percentiles
 - Graphical presentation
- Measure of central tendency – mean; median, mode
- Measures of variance
- Normal Probability and test of significance
- Co-efficient of correlation
- Statistical package and its application
- Preparing a research proposal

Application of computer

POST-BASIC DIPLOMA NEONATAL NURSING CLINICAL/PRACTICAL ACTIVITIES NURSING SKILLS

ESSENTIAL CLINICAL/PRACTICAL ASSIGNMENTS

1. Patient Care Assignments
2. Writing of Nursing care plan for assigned neonates
3. Works as Lactation nurse
4. Writing case studies 5
5. Case presentations 5
6. Writing Observation report
7. Planned health teaching 5
8. Research Project 1
9. Clinical teaching 3
10. Conduct bedside rounds
11. Prepare clinical rotation plan
12. Prepare clinical teaching plan for students
13. Perform clinical evaluation of students/staff
14. Unit management plan-Designing
15. Supervision techniques-Writing unit report, Performance appraisal, Guidance, Staff assignment, Material management
16. Maintenance of Records and Reports

ESSENTIAL NEONATAL NURSING SKILLS

I. Procedures Observed:

- i. Echo cardiogram
- ii. Ultrasound head
- iii. ROP screening (Retinopathy of prematurity)
- iv. Any other

II. Procedures Assisted

- i. Advanced neonatal life support
- ii. Lumbar Puncture
- iii. Arterial Blood Gas
- iv. ECG Recording
- v. Umbilical catheterization- arterial and venous
- vi. Arterial B P monitoring
- vii. Blood transfusion- exchange transfusion full and partial
- viii. IV cannulation & therapy
- ix. Arterial catheterization
- x. Chest tube insertion
- xi. Endotracheal intubation
- xii. Ventilation
- xiii. Insertion of long line

III. Procedures Performed:

- i. Airway Management
 - a) Application of Oro Pharyngeal Airway
 - b) Oxygen therapy
 - c) CPAP (Continuous Positive Airway Pressure)
 - d) Care of Tracheostomy
 - e) Endotracheal Intubation
- ii. Neonatal Resuscitation
- iii. Monitoring of Neonates- clinically & with monitoring, CRT (Capillary Refill Time), assessment of jaundice, ECG
- iv. Gastric Lavage
- v. Setting of Ventilators
- vi. Phototherapy
- vii. Assessment of Neonates: Identification & assessment of risk factors, APGAR Score, gestation age, Anthropometric assessment, Weighing the baby, Newborn examination, detection of life threatening congenital abnormalities.
- viii. Admission & discharge of neonates
- ix. Feeding- management of breast feeding, artificial feeding, expression of breast milk, Orogastric (OG) tube insertion, gavage feeding, TPN, Breast feeding counseling
- x. Thermoregulation –Axillary temperature, Kangaroo Mother Care (KMC), Use of Radiant warmer, incubators, management of thermoregulation & control
- xi. Administration of Drugs: I/M, IV injection, IV Cannulation & fixation infusion pump, Calculation of dosages, Neonatal formulation of drugs, use of tuberculin/ insulin syringes, Monitoring fluid therapy, Blood administration.
- xii. Procedures for prevention of infections: Hand washing, disinfections & sterilization, surveillance, fumigation.
- xiii. Collection of specimens
- xiv. Setting, Use & maintenance of basic equipment: Ventilator, O2 analyzer, monitoring equipment, Photo therapy unit, Flux meter, Infusion pump, Radiant warmer, incubator, Centrifuge machine, Bilimeter, Refractometer , laminar flow

IV. Other Procedures: