

# Syllabus and Regulations

## Post Basic Diploma in Critical Care Nursing



**Indian Nursing Council**

Combined Councils Building, Kotla Road, Temple Lane, New Delhi -110002

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Post Basic Diploma in  
Critical Care Nursing

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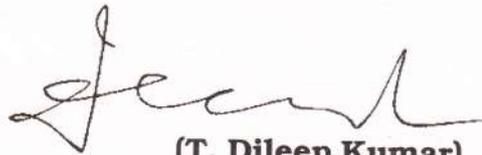
## **PREFACE**

Critical Care Nursing covers the whole spectrum of skills, knowledge and attitudes utilised by practitioners in any setting where adults or children and their families are experiencing acute and critical illness. Such settings encompass general and specialist hospitals and in the community. It covers the diverse specialities of surgery medicine, cardiac, renal, neurosciences, haematology obstetrics, accident and emergency, neonatal nursing and paediatrics.

Critical care nursing is a valuable tool in promoting excellence of care for critically ill patients by a specially trained Nurse. National Health Policy 2002 has emphasized the need for establishing training courses for Super-speciality nurses required for tertiary Care Institutions. Hence INC has prepared one-year post basic diploma course in critical care nursing to prepare nurse specialists to work in critical care setting. The course focuses on roles and responsibilities nurse in critical care setting, principles, techniques of supervision and Nursing management of patients.

I am confident that the critical care nursing syllabus prepared by INC will be able to prepare the registered nurse as nurse specialists to work in critical care setting.

I take this opportunity to acknowledge the contribution of Ms Phalakshi Manjerker and other expert nursing personnel in preparing this syllabus. I also acknowledge Ms. K.S. Bharati for designing and formatting the document.



**(T. Dileep Kumar)**

President

Indian Nursing Council  
and Nursing Adviser to  
Govt of India

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## INTRODUCTION

Critical care medicine has evolved rapidly, alongside nursing too has rapidly progressed. The emerging trauma scenario and disaster events of mass nature are adding significant strain on the individual's life as well as the family and the social system. It affects all strata of population. It is essential for the health care system to meet such needs in a specialized manner.

The National Health Policy (NHP) 2002 focuses on the preventive, curative and palliative aspects of the care. Since 1983 the NHP has guided the health care system in meeting the needs of the people to a great extent. The policy recognizes "the need for establishing training courses for specialty nurses required for tertiary care institutions".

Post basic diploma in Critical Care Nursing is designed to prepared specially trained Critical Care Nurses. The outcome of the programme will be to have more nurses prepared as critical care nurses providing competent care to the critically ill patients at the institutional levels.

## **PHILOSOPHY**

Indian Nursing Council believes that registered nurses need to be trained in critical care nursing in clinical settings in order to provide competent care to critically ill patients. Expanding roles of nurses and advances in technology necessitates additional training to prepare them for effective participation in critical care.

## **PURPOSE**

The purpose of the course is to train nurses to:

1. Provide quality care to critically ill patients.
2. Manage & supervise care of critically ill patients.
3. Teach nurses, allied health professionals and family members in areas related to critical care nursing.
4. Conduct research in areas of critical care nursing.

## **COURSE DESCRIPTION**

The course is designed to prepare registered nurses (GNM or B.Sc) with specialized knowledge, skills and attitude in providing advance quality care to critically ill patients and their families at all the three levels of care.

## **GUIDELINES FOR STARTING THE POST BASIC DIPLOMA IN CRITICAL CARE NURSING**

### **THE PROGRAMME MAY BE OFFERED AT**

A) The Government (State/Center/Autonomous) nursing teaching institution offering diploma or degree programmes in nursing having parent/ affiliated Government Hospital facilities of critical care & ICU.

Or

B) Other non-Govt. nursing teaching institution offering diploma or degree programmes in nursing having parent Hospital facilities of critical care & ICU.

Or

C) 250-500 bedded Hospital, which has a 8-10 beds **critical care beds & ICUs**

### **RECOGNITION PROCEDURE**

1. Any institution which wishes to start post basic diploma in critical care nursing should obtain the No Objection/Essentiality certificate from the State government. The institutions which are already recognized by INC for offering diploma/degree programmes in nursing are exempted for obtaining the No Objection/Essentiality certificate.
2. The Indian Nursing council on receipt of the proposal from the Institution to start nursing program (School/College), will undertake the inspection to assess suitability with regard to physical infrastructure, clinical facility and teaching faculty in order to give permission to start the programme.

3. After the receipt of the permission to start the nursing programme from Indian Nursing Council, the institution shall obtain the approval from the State Nursing Council and Examination Board/University.
4. Institution will admit the students only after taking approval of State Nursing Council and Examination Board/University.
5. The Indian Nursing Council will conduct inspection for two consecutive years for continuation of the permission to conduct the programme.

### **STAFFING**

1. Full time teaching faculty in the ratio of 1:5  
Minimum number of teaching faculty should be 2 (two)  
*Qualification:* (1) M.Sc Nursing with Medical Surgical Specialty  
(2) Post basic diploma in critical care nursing  
*Experience:* Minimum 3 years
2. *Guest faculty:* Multi-disciplinary in related specialties

### **BUDGET**

There should be budgetary provision for staff salary, honorarium for part time teachers, clerical assistance, library and contingency expenditure for the programme in the overall budget of the institution.

### **PHYSICAL FACILITIES**

1. Class room - 1
2. Nursing Laboratory -1
3. Library - Permission to use medical/hospital library having current nursing textbooks & journals in critical care, medical surgical, cardiac, respiratory, emergency nursing, burns, neuro, renal, trauma etc.
4. Teaching Aids - Facilities for the use of
  - Overhead projector

- Slide Projector, slides
  - TV with VCP or VCR, Video casettes
  - LCD projector
  - Computer, CDs, DVD player, DVD's
  - Equipment for demonstration of skills (manikins, simulators, models, specimens etc).
5. *Office facilities-*
- Services of typist, peon, safai karamchari
  - Facilities for office, equipment and supplies, such as
    - Stationary
    - Computer with printer
    - Xerox machine/Risograph
    - Telephone and fax

## **CLINICAL FACILITIES**

Minimum Bed strength

- 250-500 beds
- ICU beds:  $\geq 10$

## **ADMISSION TERMS AND CONDITIONS**

The student seeking admission to this course should:

1. Be a registered nurse (R.N & R.M) or equivalent
2. Possess a minimum of one year experience as a staff nurse.
3. Nurses from other countries must obtain an equivalence certificate from INC before admission.
4. Be physically fit.
5. No. of seats -
  - Hospital which is having 250-500 beds (8-10 ICU beds) no. of seats = 5-10
  - Hospital having more than 500 beds (20 or more ICU beds) no. of seats = 10-20

## ORGANIZATION OF THE COURSE

**I. DURATION:** Duration of the course is one academic year.

### II. DISTRIBUTION OF THE COURSE:

1. Teaching: Theory & Clinical practice	42 weeks
2. Internship	4 weeks
3. Examination (including preparation)	2 weeks
4. Vacation	2 weeks
5. Public holidays	2 weeks
	<b>52 weeks</b>

### III. COURSE OBJECTIVES:

#### General Objective

At the end of the course the student will be able to develop an understanding of philosophy, principles, methods and issues, management, education and research in critical care nursing. Further more, this course will enable them to develop skills and attitude in providing competent critical care nursing.

#### Specific Objectives:

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

1. Describe the concepts and principles of critical care nursing.
2. Communicate effectively with critically ill patients and their family members.
3. Perform advance cardiac life support skills.
4. Apply nursing process in caring of critically ill patients.

5. Participate effectively as a member of the health team
6. Organize and demonstrate skills in management of critical care nursing services.
7. Make a plan for organization of critical care units.
8. Conduct research in critical care nursing.
9. Teach and supervise nurses and allied health workers.

#### IV. COURSE OF STUDIES:

	Theory	Practical
1. Critical Care Nursing-I (Inclusive of foundation courses)	155 Hours	Integrated Clinical Practice
2. Critical Care Nursing-II	155 Hours	
3. Supervision & Management, Clinical Teaching, Elementary Research & Statistics (i) Supervision & Management (ii) Clinical Teaching (iii) Elementary Research & Statistics	30 Hours 30 Hours 30 Hours <i>240 hrs</i>	
4. Internship <i>Block</i>	160 Hours	
<b>TOTAL</b>	<b>400 Hours</b>	<b>1440 Hours</b>

- Hours distribution for theory and practice  
42 weeks × 40 hours/week  
= 1680 hours
- Block classes  
4 weeks × 40 hours/week  
= 160 hours

- Integrated theory & clinical practice
  - 38 weeks × 40 hours/week  
= 1520 hours
  - (Theory 400 hrs)\* Theory 6 hours /week  
38 weeks X 6 hours/week  
= 240 hours
  - Clinical experience 34 hours/weeks  
38 weeks X 34 hours/week  
= 1280 hours
- Internship:
  - 4 weeks x 40 hours  
= 160 hours

## V. CLINICAL EXPERIENCE

*Areas of clinical experience required*

Clinical experience must be provided as the stipulated clinical hours. The students should be posted in Critical Care Units.

Sl. No.	Clinical Area	Weeks (38 hrs./week)
1.	Critical care units and wards	General 8 weeks
2.	Cardiac & Respiratory	Medical 6 weeks
3.	Critical Care Units	Surgical 6 weeks
4.	OTs (Cardiac, neuro, respiratory, renal, major abdominal surgeries)	4 weeks
5.	Casualty/Diagnostic test	3 weeks
6.	Neuro and trauma	4 weeks
7.	Renal	2 weeks
8.	Obstretical and pediatric emergencies	2 weeks
9.	Burns & plastic surgery	3 weeks
Internship: In any of the above critical care units		4 weeks

## VI. EXAMINATION SCHEME

	Int. Ass. Marks	Ext. Ass. Marks	Total marks	Duration (in hours)
<b>A. Theory</b>				
Paper I- Clinical Nursing I	50	150	200	3
Paper II- Clinical Nursing II	50	150	200	3
Paper III- Supervision & Management, Clinical Teaching, Elementary Research & Statistics	50	150	200	3
<b>B. Practical</b>				
Clinical Nursing (teaching & supervision to be integrated)	100	100	200	
<b>Grand Total</b>	<b>250</b>	<b>550</b>	<b>800</b>	

## C. CONDITIONS FOR ADMISSION TO EXAMINATION

### *The Student:*

1. Has attended not less than 75% of the theoretical instruction hours in each subject during the year.
2. Has done not less than 75% of the clinical practical hours. However, students should make up 100% of attendance for integrated practice experience and internship in term of hours and activities before awarding the certificate.

## VII. EXAMINATION

The examination to be conducted by the State Nursing Registration Council/State Nursing Examination Board/University recognized by the Indian Nursing Council.

### **VIII. STANDARD OF PASSING**

- 1 In order to pass a candidate should obtain at least 50% marks separately in internal Assessment and external examination in each of the theory practical and papers.
- 2
  - a) Less than 60% is Second division,
  - b) 60 % and above and below 75% is First division,
  - c) 75 % and above is Distinction.
3. Students will be given opportunity of maximum of 3 attempts for passing

### **IX. CERTIFICATION**

- A. TITLE - Post Basic Diploma In **Critical Care Nursing**.
- B. A diploma is awarded upon successful completion of the prescribed study programme, which will state that
  - i) Candidate has completed the prescribed course of Critical Care Nursing.
  - ii) Candidate has completed prescribed clinical experience.
  - iii) Candidate has passed the prescribed examination.

## **CRITICAL CARE NURSING - I**

**(Including Foundation Courses)**

### **Description:**

This course is designed to develop an understanding of the concepts, principles and practices of biological and behavioral sciences in caring for critically ill patients.

### **Objectives:**

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

1. Describe the concept and principles of behavioral, biological and nursing sciences as applied to critical care nursing
2. Describe the various drugs used in critical care and nurses responsibility
3. Describe the concepts & principles of critical care Nursing.
4. Identify the sources of stress and manage burnout syndrome among health care providers.
5. Identify the psychosocial problems of patients and family members and provide holistic care.
6. Apply nursing process in providing comprehensive care to critically ill patients.
7. Practice infection control measures
8. Assess and manage pain
9. Recognise the nutritional needs of critically ill patients and their management
10. Assisting patient and family to cope with emotional and spiritual distress and grief anxiety

Theory = 155 hours

Subject	Hours	Content
Unit I	10	<b>Psychology</b> <input type="checkbox"/> Review <ul style="list-style-type: none"><li>• Individual differences</li><li>• Learning, Motivation, attention &amp; perception</li><li>• Emotions</li><li>• Human behavior &amp; needs in crisis</li><li>• Stress &amp; coping in crisis situations</li><li>• Leadership</li><li>• Communication and IPR</li><li>• Counselling</li><li>• Attitudes and humanizing care</li></ul>
Unit II	10	<b>Sociology</b> <input type="checkbox"/> Review <ul style="list-style-type: none"><li>• Social organization &amp; community resources</li><li>• Leadership roles in community,</li><li>• Family and family relationships</li><li>• Socio cultural influences</li></ul>
Unit III	10	<b>Microbiology</b> <input type="checkbox"/> Review <ul style="list-style-type: none"><li>• Immunity</li><li>• Infection</li><li>• Principles of asepsis, Sterilization &amp; disinfection</li><li>• Diagnostic tests in Microbiology &amp; related nurses' responsibility</li></ul>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>• Standard safety measures &amp; biomedical waste management</li> </ul>
Unit IV	20	<p><b>Applied Anatomy &amp; Physiology</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Review               <ul style="list-style-type: none"> <li>• Neurological system</li> <li>• Respiratory system</li> <li>• Cardiovascular system</li> <li>• Gastro intestinal system</li> <li>• Endocrine system</li> <li>• Musculoskeletal system</li> <li>• Genitourinary system</li> <li>• Reproductive system</li> <li>• Sensory organs</li> </ul> </li> </ul>
Unit V	30	<p><b>Pharmacology</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Review               <ul style="list-style-type: none"> <li>• Pharmacokinetics</li> <li>• Analgesics/Anti inflammatory agents</li> <li>• Antibiotics, antiseptics</li> <li>• Drug reaction &amp; toxicity</li> <li>• Drugs used in critical care unit (inclusive of ionotropic)</li> <li>• Drugs used in various body systems</li> <li>• Blood and blood components</li> <li>• Principles of drug administration, role of nurses and care of drugs</li> </ul> </li> </ul>

Subject	Hours	Content
UNIT VI	10	<ul style="list-style-type: none"> <li>□ Introduction to Critical Care nursing               <ul style="list-style-type: none"> <li>• Historical review</li> <li>• Concepts of critical care nursing</li> <li>• Principles of critical care nursing</li> <li>• Scope of critical care nursing</li> <li>• critical care unit set up including equipments, supplies, use and care of various type of monitors, ventilators</li> <li>• flow sheets</li> </ul> </li> </ul>
UNIT VII	15	<ul style="list-style-type: none"> <li>• Concept of Holistic care applied to critical care nursing practice               <ul style="list-style-type: none"> <li>- Psychophysiological &amp; Psychosocial impact of critical care unit on patients:-                   <ul style="list-style-type: none"> <li>Risk factors, Assessment of patients, Critical care psychosis, Prevention &amp; nursing care for patients affected with Psychophysiological &amp; Psychosocial problems of critical care unit, Caring for the patient's family, family teaching</li> </ul> </li> <li>- The dynamics of healing in critical care unit:-                   <ul style="list-style-type: none"> <li>Dynamics of touch, Relaxation, Music therapy, Guided Imagery</li> </ul> </li> </ul> </li> </ul>

Subject	Hours	Content
		Stress and burnout syndrome among health team members
UNIT VIII	5	<input type="checkbox"/> Pain Management <ul style="list-style-type: none"> <li>• Pain &amp; sedation in critically ill               <ul style="list-style-type: none"> <li>- Theories of pain, Types of pain, Pain assessment, Systemic responses to pain Pain management, Sedation in critically ill patients, Placebo effect</li> </ul> </li> </ul>
Unit IX unit.	10	<input type="checkbox"/> Infection control in intensive care <ul style="list-style-type: none"> <li>• Nosocomial infection in intensive care unit; methyl resistant staphylococcus aureus (MRSA), Disinfection, Sterilization, Standard Precautions, Prophylaxis for staff</li> </ul>
UNIT X	10	<input type="checkbox"/> Introduction to Nursing Process <ul style="list-style-type: none"> <li>• Assessment</li> <li>• Nursing diagnosis</li> <li>• Nursing care plan</li> <li>• Implementation</li> <li>• Evaluation</li> </ul>

Subject	Hours	Content
Unit XI	10	<input type="checkbox"/> Communication Skills & IPR <ul style="list-style-type: none"> <li>• Process &amp; methods</li> <li>• Establishing &amp; maintaining good IPR &amp; communication with family, staff and colleagues</li> <li>• Multidisciplinary team &amp; role of nurses</li> </ul> <input type="checkbox"/> Guidance & Counseling
Unit XII	10	<input type="checkbox"/> Nutritional Management in the critically ill patient <ul style="list-style-type: none"> <li>• Assessing nutritional status of patient</li> <li>• Implications of under nourishment in critically ill patients</li> <li>• Fluid &amp; electrolyte management</li> <li>• Administering nutrition support,</li> <li>• Therapeutic diet – Various disease conditions, Total parenteral and enteral nutrition</li> </ul>
Unit XIII	5	<input type="checkbox"/> Care of dying patients <ul style="list-style-type: none"> <li>- Spiritual support to the dying</li> <li>- Grief and grieving process</li> <li>- Bereavement support</li> <li>- Organ donation &amp; Counselling</li> <li>- Care of dead</li> </ul>

## CRITICAL CARE NURSING – II

### **Description:**

This course is designed to develop an understanding of common critical conditions of cardio vascular, respiratory, neuro, gastrointestinal, renal systems, burns, trauma, pediatric & obstetric emergencies and their management.

### **Objectives:**

The students will be able to:

1. Describe the etiology, pathophysiology, signs & symptoms investigations, medical & surgical management & complications of cardiovascular , respiratory neuro, gastrointestinal, renal systems system, burns, trauma, pediatric & obstetric emergencies.
2. Describe nurses role in various diagnostic & therapeutic procedures
3. Provide comprehensive care to patients with critical care conditions of cardiovascular , respiratory neuro, gastrointestinal, renal systems, burns, trauma, pediatric & obstetric emergencies using nursing process.

Theory = 155 hours

Subject	Hours	Content
UNIT I	15	<ul style="list-style-type: none"><li>□ Gastrointestinal System<ul style="list-style-type: none"><li>• Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis , Management: medical, surgical and Nursing management of :-<ul style="list-style-type: none"><li>- Acute Gastrointestinal Bleeding, Hepatic Disorders:-<ul style="list-style-type: none"><li>Fulminant hepatic failure, Hepatic encephalopathy, Acute Pancreatitis, Acute intestinal obstruction, Perforative peritonitis</li></ul></li></ul></li></ul></li></ul>
UNIT II	10	<ul style="list-style-type: none"><li>□ Renal System<ul style="list-style-type: none"><li>• Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis , Management: medical, surgical and Nursing management of :<ul style="list-style-type: none"><li>- Acute Renal Failure, Chronic Renal failure, Acute tubular necrosis, Bladder trauma</li></ul></li><li>• Management Modalities<ul style="list-style-type: none"><li>- Hemodialysis, Peritoneal Dialysis, Continuous Ambulatory Peritoneal Dialysis, Continuous arterio venous hemodialysis, Renal Transplant</li></ul></li></ul></li></ul>

Subject	Hours	Content
UNIT III	15	<p data-bbox="746 293 1054 331">☐ Nervous System</p> <ul style="list-style-type: none"> <li data-bbox="804 344 1385 555">• Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis , Management: medical, surgical and Nursing management of:               <ul style="list-style-type: none"> <li data-bbox="852 568 1385 651">- Common Neurological Disorders:-</li> </ul> </li> <li data-bbox="836 674 1385 965">Cerebrovascular disease, Cerebrovascular accident, Seizure disorders, Guillein-Barre-Syndrome, Myasthenia Gravis, Coma, Persistent vegetative state, Encephalopathy, Head injury, Spinal Cord Injury</li> <li data-bbox="804 987 1385 1205">• Management Modalities               <ul style="list-style-type: none"> <li data-bbox="852 1039 1385 1205">- Assessment of Intracranial pressure, Management of intracranial hypertension, Craniotomy</li> </ul> </li> <li data-bbox="804 1227 1385 1444">• Problems associated with neurological disorders               <ul style="list-style-type: none"> <li data-bbox="852 1323 1385 1444">- Thermo regulation, Unconscious-ness, Herniation syndrome</li> </ul> </li> </ul>
UNIT IV	10	<p data-bbox="746 1518 1102 1556">☐ Endocrine System</p> <ul style="list-style-type: none"> <li data-bbox="804 1570 1385 1697">• Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis , Management: medical,</li> </ul>

Subject	Hours	Content
		<p>surgical and Nursing management of</p> <ul style="list-style-type: none"> <li>- Hypoglycemia, Diabetic ketoacidosis, Thyroid crisis, Myxedema coma, Adrenal crisis, Syndrome of Inappropriate/hypersecretion of Antidiuretic Hormone (SIADH)</li> </ul>
UNIT V	20	<ul style="list-style-type: none"> <li>□ Management of other Emergency Conditions <ul style="list-style-type: none"> <li>• Trauma <ul style="list-style-type: none"> <li>- Mechanism of injury, Thoracic injuries, Abdominal injuries, Pelvic fractures, Complications of trauma, Head injuries</li> </ul> </li> <li>• Shock <ul style="list-style-type: none"> <li>- Shock syndrome, Hypovolemic shock, Cardiogenic shock, Anaphylactic shock, Neurogenic shock, Septic shock</li> </ul> </li> <li>• Systemic Inflammatory Response <ul style="list-style-type: none"> <li>- The inflammatory response, Multiple organ dysfunction syndrome</li> </ul> </li> <li>• Disseminated Intravascular Coagulation, Drug Overdose and Poisoning, AIDS: Acquired Immunodeficiency Syndrome</li> </ul> </li> </ul>

Subject	Hours	Content
UNIT VI	25	<ul style="list-style-type: none"> <li data-bbox="756 331 1331 367">❑ Intensive Cardiothoracic Nursing</li> <li data-bbox="756 389 1342 506">❑ Principles of Nursing in caring for patient's with Cardio thoracic disorders               <ul style="list-style-type: none"> <li data-bbox="807 528 1390 564">• Assessment: Cardiovascular System                   <ul style="list-style-type: none"> <li data-bbox="858 586 1390 873">- Heart sounds, Diagnostic studies:- Cardiac enzymes studies, Electrocardiographic monitoring, Holter monitoring, Stress test, Echo cardiography, Coronary angiography, Nuclear medicine studies</li> </ul> </li> <li data-bbox="807 896 1390 1097">• Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of:-                   <ul style="list-style-type: none"> <li data-bbox="858 1120 1390 1541">- Hypertensive crisis, Coronary artery disease, Acute Myocardial Infarction, Cardiomyopathy, Deep vein thrombosis, Valvular diseases, Heart block, Cardiac arrhythmias &amp; conduction disturbances, Aneurysms, Endocarditis, Heart failure Cardio pulmonary resuscitation - BCLS/ACLS</li> </ul> </li> <li data-bbox="807 1563 1219 1599">• Management Modalities                   <ul style="list-style-type: none"> <li data-bbox="858 1621 1299 1697">- Thrombolytic therapy, Pacemaker - temporary &amp;</li> </ul> </li> </ul> </li> </ul>

Subject	Hours	Content
		permanent, Percutaneous transluminal coronary angioplasty, Cardioversion, Intra Aortic Balloon Pulsations, Defibrillations, Cardiac surgeries, Coronary Artery Bypass Grafts (CABG / MICAS), Valvular surgeries, Heart Transplantation, Autologous Blood Transfusion, Radiofrequency Catheter Ablation.
UNIT VII	20	<input type="checkbox"/> Respiratory System <ul style="list-style-type: none"> <li>• Acid - base balance &amp; imbalance</li> <li>• Assessment: History &amp; Physical Examination - Diagnostic Tests:- Pulse Oximetry, End-Tidal Carbon Dioxide Monitoring, Arterial blood gas studies, Chest Radiography, Pulmonary Angiography, Bronchoscopy, Pulmonary function Test, Ventilation perfusion scan, Lung ventilation scan</li> <li>• Causes, pathophysiology, Clinical types, Clinical features, Prognosis, Management: medical, surgical and Nursing management of Common Pulmonary Disorders:-</li> </ul>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>- Pneumonia, Status asthmaticus, Interstitial lung disease, Pleural effusion, Chronic obstructive pulmonary disease, Pulmonary tuberculosis, Pulmonary edema, Atelectasis, Pulmonary embolism, Acute respiratory failure, Acute respiratory distress syndrome(ARDS), Chest Trauma Haemothorax, Pneumothorax</li> <li>• Management Modalities: <ul style="list-style-type: none"> <li>- Airway Management</li> </ul> </li> <li>• Ventilatory Management:- <ul style="list-style-type: none"> <li>- Invasive, non-invasive, long term mechanical ventilations</li> </ul> </li> <li>• Bronchial Hygiene:- <ul style="list-style-type: none"> <li>- Nebulization, deep breathing exercise, chest physiotherapy, postural drainage Inter Costal Drainage, Thoracic surgeries</li> </ul> </li> </ul>
	15	<p>□ BURNS</p> <ul style="list-style-type: none"> <li>• Clinical types, classification, pathophysiology, Clinical features, assessment, diagnosis, Prognosis , Management: medical, surgical and Nursing management of burns</li> </ul>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>• Fluid and electrolyte therapy- calculation of fluids and its administration</li> <li>• Pain management</li> <li>• Wound care</li> <li>• Infection control</li> <li>• Prevention and management of burn complications</li> <li>• Grafts and flaps</li> <li>• Reconstructive surgery</li> <li>• Rehabilitation</li> </ul>
UNIT VIII	10	<p>☐ Neonatal Paediatric Nursing</p> <p>Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of</p> <p>- Neonatal emergencies</p> <p>Assessment of newborn, Low Birth Weight infant, Asphyxia Neonatarum, Pathological Jaundice in Neonates, Neonatal seizures, Metabolic disorders, Intra cranial Hemorrhage, Neonatal Sepsis, RDS/HMD (Respiratory Distress Syndrome/Hyaline Membrane Disease), Status asthamicus</p>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>- Congenital disorders:- Cyanotic heart disease, tracheo oesophageal fistula, congenital hypertropic pyloric stenosis, imperforate anus</li> <li>• Pediatric emergencies               <ul style="list-style-type: none"> <li>- Dehydration, Acute broncho pneumonia, Acute respiratory distress syndrome, Poisoning, Foreign bodies</li> </ul> </li> <li>• Psychosocial issues of the child &amp; family</li> <li>• Management modalities               <ul style="list-style-type: none"> <li>- Management of hypothermia, ventilatory management</li> </ul> </li> </ul>
UNIT IX	15	<ul style="list-style-type: none"> <li>□ Obstetrical emergencies Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of:               <ul style="list-style-type: none"> <li>- Antepartum haemorrhage, Preeclampsia, eclampsia, Obstructed labour and ruptured uterus, Post partum haemorrhage, Puerperal sepsis, obstetrical shock</li> </ul> </li> </ul>

## **SUPERVISION & MANAGEMENT, CLINICAL TEACHING, ELEMENTARY RESEARCH & STATISTICS**

**Total Hours: 90**

<b>Section-A</b>	<b>Supervision &amp; Management</b>	-30 HRS
<b>Section-B</b>	<b>Clinical Teaching</b>	-30 HRS
<b>Section-C</b>	<b>Elementary research &amp; Statistics</b>	-30 HRS

### **Description:**

This course is designed to develop an 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 critical care unit & ICU.
3. Teach nurses and allied health workers about critical care nursing.
4. Describe research process and perform basic statistical tests.
5. Plan and conduct research in critical care nursing

Subject	Hours	Content
UNIT I	20	<p><b>SUPERVISION &amp; MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>□ Management <ul style="list-style-type: none"> <li>• Definition &amp; Principles</li> <li>• Elements of management of critical care unit:-Planning, Organizing, Staffing, Reporting, Recording and Budgeting</li> <li>• ICU &amp; critical care unit management:-Time, material &amp; personnel</li> <li>• Layout and Design of an Ideal ICU &amp; critical care unit.</li> <li>• Critically ill patients transport services <ul style="list-style-type: none"> <li>- Planning of transport</li> <li>- Planning Men &amp; Material for transportation(mobile van set-up)</li> <li>- Pre-hospital care (trauma site, during transportation)</li> </ul> </li> </ul> </li> <li>□ Clinical supervision <ul style="list-style-type: none"> <li>• Introduction, definition and objectives of supervision</li> <li>• Principles &amp; Functions of supervision</li> <li>• Qualities of supervisors</li> <li>• Responsibilities of clinical supervisors</li> </ul> </li> </ul>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>• Practice Standards of critical care units               <ul style="list-style-type: none"> <li>- Policies and Procedures</li> <li>- Establishing Standing orders and Protocols</li> </ul> </li> <li>• Orientation programme for new recruits</li> <li>□ Quality Assurance Programme in critical care units               <ul style="list-style-type: none"> <li>• Nursing audit</li> </ul> </li> <li>□ Performance Appraisal               <ul style="list-style-type: none"> <li>• Principles of performance evaluation</li> <li>• Tools of performance appraisal                   <ul style="list-style-type: none"> <li>- Rating scales</li> <li>- Checklists</li> <li>- Peer reviews</li> <li>- Self appraisals</li> </ul> </li> </ul> </li> <li>□ Staff development               <ul style="list-style-type: none"> <li>• Introduction &amp; purposes</li> <li>• In-service education</li> <li>• Continuing education</li> </ul> </li> </ul>
UNIT II	5	<ul style="list-style-type: none"> <li>□ Professional trends               <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Code of Ethics, code of professional conduct and practice standards of Nursing in India</li> </ul> </li> </ul>

Subject	Hours	Content
		<ul style="list-style-type: none"> <li>• Ethical issues in critical care unit</li> <li>• Expanding role of the nurse: Specialist nurse, Nurse Practitioner etc</li> <li>• Professional organizations</li> </ul>
UNIT III	5	<ul style="list-style-type: none"> <li>□ Medico-Legal aspects <ul style="list-style-type: none"> <li>• Legislations and regulations related to critical care</li> <li>• Consumer Protection Act (CPA)</li> <li>• Negligence &amp; Malpractice</li> <li>• Legal responsibilities of nurses <ul style="list-style-type: none"> <li>- Bill of right of a patient, Euthanasia</li> <li>- Case studies of judgment with regard to negligence of services in the Hospital</li> </ul> </li> <li>• Records and Reports</li> <li>• Role of the nurse in Legal issues</li> <li>• Professional practice issues in the Critical Care Unit <ul style="list-style-type: none"> <li>- Bioethical Issues in Critical Care:- Ethics, Ethical principles, Withholding &amp; withdrawing treatment, Ethical decision making in a critical care unit</li> </ul> </li> </ul> </li> </ul>

Subject	Hours	Content
		Code of Professional conduct and Practice Standards
UNIT IV	30	<ul style="list-style-type: none"> <li>□ Teaching learning process               <ul style="list-style-type: none"> <li>• Introduction and concepts</li> <li>• Principles of teaching and learning</li> <li>• Formulation of learning objectives</li> <li>• Lesson Planning</li> <li>• Teaching methods                   <ul style="list-style-type: none"> <li>- Lecture</li> <li>- Demonstration, Simulation</li> <li>- Discussion</li> <li>- Clinical teaching methods</li> <li>- Micro teaching</li> <li>- Self learning</li> </ul> </li> <li>• Evaluation                   <ul style="list-style-type: none"> <li>- Assessment of Students                       <ul style="list-style-type: none"> <li>o Purposes</li> <li>o Type</li> <li>o Steps</li> <li>o Tools for assessing knowledge, skill and attitude</li> </ul> </li> </ul> </li> <li>• Use of media in teaching learning process</li> </ul> </li> </ul>

Subject	Hours	Content
UNIT V	30	<ul style="list-style-type: none"> <li><input type="checkbox"/> Research               <ul style="list-style-type: none"> <li>• Research and research process</li> <li>• Types of Research</li> <li>• Research Problem/ Question</li> <li>• Review of Literature</li> <li>• Research approaches and designs</li> <li>• Sampling</li> <li>• Data collection: Tools and techniques</li> <li>• Analysis and interpretation of data:</li> <li>• Communication and utilization of Research</li> <li>• Research priorities in critical care</li> </ul> </li> <li><input type="checkbox"/> Statistics               <ul style="list-style-type: none"> <li>• Sources and presentation of Data                   <ul style="list-style-type: none"> <li>- qualitative and quantitative</li> <li>- Tabulation; frequency distribution, percentiles</li> <li>- Graphical presentation</li> </ul> </li> <li>• Measures of central tendency- mean; median, mode</li> <li>• Measures of variance</li> <li>• Normal Probability and tests of significance</li> <li>• Co-efficient of correlation.</li> <li>• Statistical packages and its application</li> <li>• Preparing a research proposal</li> </ul> </li> <li><input type="checkbox"/> Application of computers</li> </ul>

## TEACHING LEARNING ACTIVITIES

### (i) Methods of Teaching:

- ❖ Lecture
- ❖ Demonstration & Discussion
- ❖ Supervised practice
- ❖ Seminar
- ❖ Role play
- ❖ Workshop
- ❖ Conference
- ❖ Skill training
- ❖ Simulations
- ❖ Field visits
- ❖ Research project

### (ii) A.V Aids:

- ❖ Over head projector
- ❖ Slide Projector
- ❖ Black board
- ❖ Graphic Aids
- ❖ Programmed – Video shows
- ❖ Models & Specimens
- ❖ LCD projector
- ❖ Computer

**(iii) Methods of Assessment:**

- ❖ Written examination
- ❖ Objective type
- ❖ Short notes
- ❖ Assignments
- ❖ Case studies/care notes
- ❖ Clinical presentation
- ❖ Seminars
- ❖ Project

## **ESSENTIAL CLINICAL/PRACTICAL ACTIVITIES**

(i) Patient Care Assignments		
(ii) Writing of Nursing care plan for assigned critically ill patients		
(iii) Writing case studies	-	<b>5</b>
(iv) Case presentations	-	<b>5</b>
(v) Writing Observation report of various OT		
(vi) Planned health teaching	-	<b>3</b>
(vii) Project	-	<b>1</b>
(viii) Clinical teaching	-	<b>3</b>
(ix) Drug study		<b>2</b>
(x) Conduct bedside rounds		
(xi) Prepare clinical rotation plan		
(xii) Prepare clinical teaching plan for students		
(xiii) Perform clinical evaluation of students/staff		
(xiv) Unit management plan- Designing		
(xv) Supervision techniques- Writing unit report, Performance appraisal, Guidance, Staff assignment, Material management		
(xvi) Maintenance of Records and Reports		

### **Essential critical care nursing skills**

#### **I. Procedures Observed:**

- (i) Echo cardiogram
- (ii) Ultrasound
- (iii) Monitoring ICP
- (iv) CT SCAN

- (v) MRI
- (vi) Pet SCAN
- (vii) Angiography
- (viii) Cardiac catheterisation
- (ix) Angioplasty
- (x) Various Surgeries
- (xi) Any other

**II. Procedures Assisted:**

- (i) Monitoring ICP
- (ii) Advanced life support system
- (iii) Arterial Blood Gas
- (iv) ECG Recording
- (v) Arterial catheterization
- (vi) Chest tube insertion
- (vii) Endotracheal intubation
- (viii) Ventilation
- (ix) Central line, Arterial line, Cardiac pacing
- (x) Use of defibrillator, Cardiopulmonary resuscitation
- (xi) Endoscopy
- (xii) Dialysis-Hemodialysis and peritoneal dialysis
- (xiii) Intra venous pyelography(IVP)
- (xiv) EEG
- (xv) Bronchoscopy

**III. Procedures Performed:**

- (i) Neurological assessment; Glasgow coma scale
- (ii) Pulse oxymetry,

- (iii) Arterial B P monitoring
- (iv) Venous access, ABG collection monitoring
- (v) Oxygen administration, Suctioning, Respiratory therapy, Tracheotomy toilet
- (vi) Airway Management
  - a) Application of Oro Pharyngeal Airway
  - b) Oxygen therapy
  - c) CPAP(Continuous Positive Airway Pressure)
  - d) Care of Tracheostomy
  - e) Endotracheal Intubation
- (vii) Care of intercostal drainage
- (viii) Nebulisation
- (ix) Chest physiotherapy
- (x) Monitoring of Critically ill patients – clinically & with monitors, CRT(Capillary Refill Time), ECG
- (xi) Gastric Lavage
- (xii) Setting of Ventilators
- (xiii) Assessment of Neonates: Identification & assessment of risk factors, APGAR Score
- (xiv) Admission & discharge of critically ill patients
- (xv) OG (Orogastric) tube insertion,
- (xvi) Thermoregulation- management of thermoregulation & control, Use of hypothermia machines
- (xvii) Administration of Drugs: I/M, IV injection, IV Cannulation & fixation infusion pump, Calculation of dosages, Monitoring fluid therapy,
- (xviii) Administration of Blood and its components.

- (xix) Procedures for prevention of infections: Hand washing, disinfections & sterilization, surveillance, fumigation
- (xx) Collection of specimens related to critical care
- (xxi) Burns: assessment, calculation of fluid-crystalloid and colloid
- (xxii) Maintenance of intake and output chart.
- (xxiii) Wound dressing and prevention of contractures
- (xxiv) Rehabilitation

**IV. Other Procedures:**