

Template for Course Plan (Critical care nursing11)

Course Description:

This course Advanced critical care nursing is a specialized field that focuses on providing care to critically ill patients, often in settings such as intensive care units (ICUs), emergency departments (EDs), or specialized care units. These nurses are highly trained to handle complex, life-threatening conditions and use advanced medical technologies and interventions. They play a crucial role in monitoring patients, managing ventilators, administering medications, and collaborating with the healthcare

Course Content:

A – Theoretical Aspect:

Contact hours	No. of Weeks	Sub Topics List	Units/Topics List	Order
4	1	Critical Care Nursing Principles: Foundational concepts, including the roles and responsibilities of critical care nurses. Advanced Pathophysiology: In-depth understanding of disease processes affecting critical care patients, including cardiovascular, respiratory, neurological, renal, and gastrointestinal systems. Pharmacology in Critical Care: Study of medications commonly used in critical care, including sedatives, vasopressors, inotropes, analgesics, and their pharmacokinetics and interactions. Ethics and Legal Issues in Critical Care: Exploring ethical dilemmas (e.g., end-of-life care, organ donation, patient autonomy) and understanding the legal aspects of critical care practice	1. Core Critical Care Concepts	1
12	3	Invasive and non-invasive methods to monitor cardiac output, blood pressure, central venous pressure (CVP), and pulmonary artery pressures. -Use and interpretation of arterial lines, central lines, and Swan-Ganz catheters. Mechanical Ventilation: Management of ventilated patients, modes of ventilation (e.g., volume-controlled, pressure-	2. Advanced Clinical Skills Hemodynamic Monitoring	2

		controlled), and troubleshooting ventilators. ○ Techniques for ventilator weaning and extubation. • Airway Management: ○ Intubation and extubation procedures, tracheostomy care, and managing airway emergencies. • Renal Replacement Therapy (RRT): ○ Continuous renal replacement therapy (CRRT), intermittent hemodialysis, and peritoneal dialysis for critically ill patients. • Neurological Monitoring: ○ Management of patients with neurological disorders, including intracranial pressure (ICP) monitoring, Glasgow Coma Scale (GCS) assessments, and the care of stroke and traumatic brain injury (TBI) patients		
12	3	☐ Management of patients with heart failure, myocardial infarction, cardiogenic shock, and arrhythmias. Advanced cardiac life support (ACLS) protocols, resuscitation, and post-cardiac arrest care. ☐ Respiratory System: Care of patients with respiratory failure, acute respiratory distress syndrome (ARDS), pulmonary embolism, and pneumonia. Oxygen therapy and non-invasive ventilation (e.g., CPAP, BiPAP). ☐ Renal and Metabolic System: Management of acute kidney injury (AKI), electrolyte imbalances, and acid-base disturbances. Nutritional support, including enteral and parenteral feeding. ☐ Neurological System: Care of patients with stroke, seizures, and traumatic brain injury. Assessment and management of delirium in ICU patients. ☐ Gastrointestinal System: Management of conditions such as gastrointestinal bleeding, liver failure, and pancreatitis.	3. System-Specific Critical Care • Cardiovascular System	3

		☑ Sepsis and Shock States: Recognition, treatment, and monitoring of patients in septic shock, hypovolemic shock, and distributive shock		
4	1	Central Line and Arterial Line Insertion: Techniques for sterile insertion and maintenance, as well as complications management. Chest Tube Management: Insertion, care, and monitoring of chest tubes. Defibrillation and Cardioversion: Proper use of defibrillators, managing arrhythmias, and performing synchronized cardioversion	4. Critical Care Procedures	4
4	1	Interdisciplinary Teamwork: Collaboration with physicians, respiratory therapists, pharmacists, and other healthcare professionals. Patient and Family-Centered Care: Involving patients and their families in care decisions, providing support, and educating families about patient conditions and care processes. Palliative Care in Critical Care: Managing terminally ill patients and providing end-of-life care, including ethical decision-making in withdrawal of life-sustaining therapies	5. Multidisciplinary and Collaborative Care	5
4	1	Application of Evidence-Based Guidelines: Using clinical research and guidelines to inform decisions on ventilator management, sepsis treatment, and hemodynamic monitoring. Quality Improvement in Critical Care: Participation in initiatives to reduce hospital-acquired infections (e.g., central line infections, ventilator-associated pneumonia) and improve patient outcomes. Clinical Audits and Research: Understanding the role of audits in evaluating ICU performance and contributing to research in critical care.	6. Evidence-Based Practice and Research in Critical Care	6
2	1	Midterm exam		7
4	1	CCRN (Critical Care Registered Nurse) Preparation: Courses often provide training aligned with certification requirements, covering adult, pediatric, and neonatal critical	7. Advanced Critical Care Certifications Preparation	8

		care.		
		Advanced Cardiac Life Support (ACLS) Certification: Detailed study of resuscitation protocols and emergency cardiovascular care		
4	1	Critical Care Unit Management: Understanding the role of nurse leaders in staffing, patient safety, and resource management. Conflict Resolution and Communication: Strategies for handling high-stress situations, communicating effectively with the healthcare team, and managing conflicts in a fast-paced environment	8. Leadership and Management in Critical Care	9
4	1	Acute Care Nurse Practitioner (ACNP) or Clinical Nurse Specialist (CNS): Advanced roles and responsibilities, including independent management of critically ill patients, ordering diagnostics, and prescribing treatments. Leadership in critical care research, education, and policy development.	9. Advanced Practice Roles	10
4	1	Continuing Education in Critical Care Nursing: Emphasis on lifelong learning, attending workshops, seminars, and participating in specialty conferences to stay current with emerging trends and technologies	10. Professional Development and Lifelong Learning	11
2	1	Final exam		12
60	16	Number of Weeks /and Units Per Semester		

B - Practical Aspect:			
contact hours	Number of Weeks	Tasks/ Experiments	Order
4	2	1. Core Critical Care Concepts	
4	2	2. Advanced Clinical Skills Hemodynamic Monitoring	
4	2	3. System-Specific Critical Care • Cardiovascular System	
4	2	4. Critical Care Procedures	
4	1	5. Multidisciplinary and Collaborative Care	
4	2	6. Evidence-Based Practice and Research in Critical Care 7. Advanced Critical Care Certifications Preparation	
2	2	8. Leadership and Management in Critical Care	
2	1	9. Advanced Practice Roles	
28	14	Number of Weeks /and Units Per Semester	