

Subject Code: 1NR2010203	Subject Title: (Clinical Speciality-II) MEDICAL SURGICAL NURSING
Pre-requisite	-----NA-----

SUB SPECIALITY – CARDIO VASCULAR AND THORACIC NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth understanding in the field of cardiovascular and thoracic nursing. It will help students to develop advanced skills for nursing intervention in various cardio medical and surgical conditions. It will enable the student to function as Cardio vascular and Thoracic Nurse practitioner/specialist. It will further enable the student to function as educator, manager and researcher in the field of cardio vascular and thoracic nursing.

Teaching Scheme (Total Hours)			Evaluation Scheme (Marks)				
Lecture (Class and Lab)	Clinical Hours	Total Hours	Theory		Practical		Total
			University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
150	950	1100	75	25	100	100	300

Objectives

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

1. Appreciate trends and issues related to cardio vascular and thoracic Nursing.
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of cardio vascular and thoracic conditions
3. Participate in national health programs for health promotion, prevention and rehabilitation of patients with cardio vascular and thoracic conditions
4. Perform physical, psychosocial & spiritual assessment
5. Assist in various diagnostic, therapeutic and surgical procedures
6. Apply nursing process in providing comprehensive care to patients with cardio vascular and thoracic conditions
7. Demonstrate advance skills/competence in managing patients with cardio vascular and thoracic conditions including Advance Cardiac Life Support.
8. Describe the various drugs used in cardio vascular and thoracic conditions and nurses responsibility
9. Demonstrate skill in handling various equipments/gadgets used for critical care of cardio vascular and thoracic patients
10. Appreciate team work & coordinate activities related to patient care.
11. Practice infection control measures.
12. Identify emergencies and complications & take appropriate measures
13. Discuss the legal and ethical issues in cardio vascular and thoracic nursing
14. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs.
15. Appreciate the role of alternative system of medicine in care of patient
16. Incorporate evidence based nursing practice and identify the areas of

research in the field of cardio vascular and thoracic nursing

17. Identify the sources of stress and manage burnout syndrome among health care providers.
18. Teach and supervise nurses and allied health workers.
19. Design a layout of ICCU and ICTU and develop standards for cardio vascular and thoracic nursing practice.

Content Outline

Unit	Hours	Content
I	5	Introduction Historical development, trends and issues in the field of cardiology. Cardio vascular and thoracic conditions – major health problem. Concepts, principles and nursing perspectives Ethical and legal issues Evidence based nursing and its application in cardio vascular and thoracic nursing(to be incorporated in all the units)
II	5	Epidemiology Risk factors: hereditary, psycho social factors, hypertension, smoking, obesity, diabetes mellitus etc Health promotion, disease prevention, Life style modification National health programs related to cardio vascular and thoracic conditions Alternate system of medicine Complementary therapies
III	5	Review of anatomy and physiology of cardio vascular and respiratory system Review of anatomy and physiology of heart, lung, thoracic cavity and blood vessels. Embryology of heart and lung. Coronary circulation Hemodynamics and electro physiology of heart. Bio-chemistry of blood in relation to cardio pulmonary function.
IV	20	Assessment and Diagnostic Measures: History taking Physical assessment - Heart rate variability: Mechanisms , measurements, pattern, factors, impact of interventions on HRV Diagnostic tests - Hemodynamic monitoring: Technical aspects, monitoring, functional hemodynamic indices, ventricular function indices,

Unit	Hours	Content
		Output measurements (Arterial and swan Ganz monitoring). Blood gases and its significance, oxygen supply and demand • Radiologic examination of the chest: interpretation, chest film findings • Electro cardiography (ECG) : electrical conduction through the heart, basic electrocardiography, 12 lead electrocardiogram, axis determination - ECG changes in: intraventricular conduction abnormalities- Arrhythmias, ischemia, injury and infarction, atrial and ventricular enlargement, electrolyte imbalance, • Echocardiography: technical aspects, special techniques, echocardiography of cardiac structures in health and disease, newer techniques • Nuclear and other imaging studies of the heart: Magnetic Resonance Imaging. • Cardio electrophysiology procedures: diagnostic studies, interventional and catheter ablation, nursing care • Exercise testing: indications and objectives, safety and personnel, pretest considerations, selection, interpretation, test termination, recovery period • Cardiac catheterization: indications, contraindications, patient preparation, procedure, interpretation of data • Pulmonary function test: Bronchoscopy and graphies • Interpretation of diagnostic measures • Nurse's role in diagnostic tests Laboratory tests using blood: Blood specimen collection, Cardiac markers, Blood lipids, Hematologic studies, Blood cultures, Coagulation studies, Arterial blood gases, Blood Chemistries, cardiac enzyme studies, Serum Concentration of Selected drugs. Interpretation and role of nurse
V	25	Cardiac disorders and nursing management: Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: • Hypertension • Coronary Artery Disease. • Angina of various types. • Cardiomegaly • Myocardial Infarction, Congestive cardiac failure • Heart Failure, Pulmonary Edema, Shock. • Rheumatic heart disease and other Valvular Diseases • Inflammatory Heart Diseases, Infective Endocarditis, Myocarditis, Pericarditis. • Cardiomyopathy, dilated, restrictive, hypertrophic. • Arrhythmias, heart block Associated illnesses

Unit	Hours	Content
VI	10	Altered pulmonary conditions Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: • Bronchitis • Bronchial asthma • Bronchiectasis • Pneumonias • Lung abscess, lung tumor • Pulmonary tuberculosis, fibrosis, pneumoconiosis etc • Pleuritis, effusion • Pneumo, haemo and pyothorax • Interstitial Lung Disease • Cystic fibrosis • Acute and Chronic obstructive pulmonary disease (conditions leading to) • Cor pulmonale • Acute respiratory failure • Adult respiratory distress syndrome • Pulmonary embolism • Pulmonary Hypertension
VII	10	Vascular disorders and nursing management Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: • Disorders of arteries • Disorders of the aorta • Aortic Aneurysms, • Aortic dissection • Raynaud's phenomenon • Peripheral arterial disease of the lower extremities • Venous thrombosis • Varicose veins • Chronic venous insufficiency and venous leg ulcers • Pulmonary embolism
VIII	10	Cardio thoracic emergency interventions CPR- BLS and ALS Use of ventilator, defibrillator , pacemaker Post resuscitation care. Care of the critically ill patients Psychosocial and spiritual aspects of care Stress management; ICU psychosis Role of nurse
IX	10	Nursing care of a patient with obstructive airway Assessment Use of artificial airway Endotracheal intubation, tracheostomy and its care Complication, minimum cuff leak, securing tubes Oxygen delivery systems. Nasal Cannula



Unit	Hours	Content
X	10	Oxygen mask, Venturi mask Partial rebreathing bag Bi-PAP and C-PAP masks Uses, advantages, disadvantages, nursing implications of each. Mechanical Ventilation Principles of mechanical ventilation Types of mechanical ventilation and ventilators. Modes of ventilation, advantage, disadvantage, complications. PEEP therapy, indications, physiology, and complications. Weaning off the ventilator. Nursing assessment and interventions of ventilated patient. Congenital Heart Diseases, Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: • Embryological development of heart. • Classification – cyanotic and acyanotic heart disease. • Tetralogy of Fallots. • Atrial Septal Defect, Ventricular Septal Defect, Eisenmenger's Complex • Patent ductus arteriosus, AP window • Truncus Arteriosus. • Transposition of great arteries. • Total Anomaly of Pulmonary Venous Connection. • Pulmonary stenosis, atresia. • Coarctation of aorta. • Ebstein's anomaly • Double outlet right ventricle, Single ventricle, Hypoplastic left heart syndrome.
XI	10	Pharmacology Review Pharmacokinetics Analgesics/Anti inflammatory agents Antibiotics, antiseptics Drug reaction & toxicity Drugs used in cardiac emergencies Blood and blood components • Antithrombolytic agents • Inotropic agents • Beta-blocking agents • Calcium channel blockers. • Vaso constrictors • Vaso dilators • ACE inhibitors. • Anticoagulents • Antiarrhythmic drugs. • Anti hypertensives • Diuretics • Sedatives and tranquilizers. • Digitalis.

Unit	Hours	Content
		Antilipemics Principles of drug administration, role and responsibilities of nurses and care of drugs
XII	20	Nursing Care of patient undergoing cardio thoracic surgery Indications, selection of patient Preoperative assessment and preparation; counselling. Intraoperative care: Principles of open heart surgery, equipment, anaesthesia, cardiopulmonary bypass. Surgical procedures for Coronary Artery Bypass Grafting, recent advances and types of grafts, Valve replacement or reconstruction, cardiac transplant, Palliative surgery and different Stents, vascular surgery, other recent advances. Thoracic surgery: lobectomy, pneumonectomy, tumour excision etc Immediate postoperative care : assessment, post operative problems and interventions : Bleeding, Cardiac tamponade, Low cardiac output, Infarction, Pericardial effusion, Pleural effusion, Pneumothorax, Haemothorax, Coagulopathy, Thermal imbalance, Inadequate., ventilation/perfusion, Neurological problems, renal problems, Psychological problems. Chest physiotherapy Nursing interventions- life style modification, complementary Therapy / alternative systems of medicine. Intermediate and late post operative care after CABG, valve surgery, others.
XIII	5	Follow up care Cardiac rehabilitation Process Physical evaluation Life style modification Physical conditioning for cardiovascular efficiency through exercise Counseling
XIV	5	Follow up care Intensive Coronary Care Unit/intensive cardio thoracic unit: Quality assurance - Standards, Protocols, Policies, Procedures - Infection control; Standard safety measures - Nursing audit - Design of ICCU/ICTU - Staffing; cardiac team - Burn out syndrome Nurse's role in the management of I.C.C.U and ICTU. Mobile coronary care unit. Planning inservice educational programme and teaching

Practicals

S.No.	Deptt/ Unit	No. of Week	Total Hours
1	Cardio thoracic -Medical	4	120 Hours
	-Surgical	4	120 Hours
2.	OTs (Cardiac and thoracic)	4	120 Hours
3.	Casualty	2	60 Hours
4.	Diagnostic labs including cath lab	2	60 Hours
5.	ICCU	4	120 Hours
6.	ICU	4	120 Hours
7.	CCU	4	120 Hours
8.	Paediatric Intensive	2	60 Hours
9.	OPD	2	60 Hours
	Total	32 Weeks	960 Hours

Essential Nursing Skills

Procedures Observed

1. Echo cardiogram
2. Ultrasound
3. Monitoring JVP , CVP
4. CT SCAN
5. MRI
6. Pet SCAN
7. Angiography
8. Cardiac catheterization
9. Angioplasty
10. Various Surgeries
11. Any other

I. Procedures Assisted

1. Arterial blood gas analysis
2. Thoracentesis
3. Lung biopsy
4. Computer assisted tomography (CAT Scan)
5. M.R.I.
6. Pulmonary angiography
7. Bronchoscopy
8. Pulmonary function test
9. ET tube insertion
10. Tracheostomy tube insertion
11. Cardiac catheterisation
12. Angiogram
13. Defibrillation
14. Treadmill test

15. Echo cardiography
16. Doppler ultrasound
17. Cardiac surgery
18. Insertion of chest tube
19. CVP Monitoring
20. Measuring pulmonary artery pressure by Swan - Ganz Catheter
21. Cardiac Pacing

II. Procedures Performed

1. Preparation of assessment tool for CT client (Cardiac, thoracic and vascular).
2. ECG – Recording, Reading, Identification of abnormalities
3. Oxygen therapy – Cylinder, central supply, Catheter, nasal canula, mask, tent
Through ET and Tracheostomy tube
Manual resuscitation bag
4. Mechanical ventilation
5. Spirometer
6. Tuberculen skin test
7. Aerosal therapy
8. Nebulizer therapy
9. Water seal drainage
10. Chest physiotherapy including – Breathing Exercises Coughing Exercises Percussion & Vibration
11. Suctioning – Oropharyngeal, nasotracheal, Endotracheal Through tracheostomy tube
12. Artificial airway cuff maintenance
13. CPR
14. Care of client on ventilator
15. Identification of different – Arrhythmias
Abnormal pulses, respirations
B.P. Variation
Heart sounds
Breath sounds
16. Pulse oxymetry
17. Introduction of intracath
18. Bolus I.V. Injection
19. Life line
20. Maintenance of “Heplock”
21. Subcutaneous of Heparin
22. Obtaining leg measurements to detect early swelling in thrombophlebetes
23. Identification of Homans signs
24. Buerger – Allen exercises

SUB SPECIALITY - CRITICAL CARE NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth knowledge in the field of Critical Care Nursing. It will help students to develop advanced skills for nursing intervention in caring for critically ill patients. It will enable the student to function as critical care nurse practitioner/ specialist. It will further enable the student to function as educator, manager and researcher in the field of Critical Care Nursing.

Objectives

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

1. Appreciate trends and issues related to Critical Care Nursing.
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of critically ill patients
3. Describe the various drugs used in critical care and nurses responsibility
4. Perform physical, psychosocial & spiritual assessment
5. Demonstrate advance skills/competence in managing critically ill patients including Advance Cardiac Life Support.
6. Demonstrate skill in handling various equipments/gadgets used for critical care
7. Provide comprehensive care to critically ill patients.
8. Appreciate team work & coordinate activities related to patient care.
9. Practice infection control measures.
10. Assess and manage pain.
11. Identify complications & take appropriate measures.
12. Discuss the legal and ethical issues in critical care nursing
13. Assist patients and their family to cope with emotional distress, spiritual, grief and anxiety
14. Assist in various diagnostic, therapeutic and surgical procedures
15. Incorporate evidence based nursing practice and identify the areas of research in the field of critical care nursing
16. Identify the sources of stress and manage burnout syndrome among health care providers.
17. Teach and supervise nurses and allied health workers.
18. Design a layout of ICU and develop standards for critical care nursing practice.

Course Content

Unit	Hours	Content
I	5	Introduction to Critical Care Nursing Historical review- Progressive patient care(PPC) Review of anatomy and physiology of vital organs, fluid and electrolyte balance Concepts of critical care nursing Principles of critical care nursing Scope of critical care nursing Critical care unit set up including equipments supplies, use and care of various type of monitors & ventilators Flow sheets
II	10	Concept of Holistic care applied to critical care nursing practice Impact of critical care environment on patients:- • Risk factors, Assessment of patients, Critical care psychosis, prevention & nursing care for patients affected with psychophysiological & psychosocial problems of critical care unit, Caring for the patient's family, family teaching The dynamics of healing in critical care unit:-therapeutic touch, Relaxation, Music therapy, Guided Imagery, acupressure Stress and burnout syndrome among health team members
III	14	Review Pharmacokinetics Analgesics/Anti inflammatory agents Antibiotics, antiseptics Drug reaction & toxicity Drugs used in critical care unit (inclusive of ionotropic, life saving drugs) Drugs used in various body systems IV fluids and electrolytes Blood and blood components Principles of drug administration, role of nurses and care of drugs
IV	5	Pain Management Pain & Sedation in Critically ill patients Theories of pain, Types of pain, Pain assessment, Systemic responses to pain pain management-pharmacological and non-pharmacological measures Placebo effect



Unit	Hours	Content
V	5	Infection control in intensive care unit Nosocomial infection in intensive care unit; methyl resistant staphylococcus aureus (MRSA), Disinfection, Sterilization, Standard safety measures, Prophylaxis for staff
VI	10	Gastrointestinal System Causes, Pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing management of:-Acute Gastrointestinal Bleeding, Abdominal injury, Hepatic Disorders:-Fulminant hepatic failure, Hepatic encephalopathy, Acute Pancreatitis, Acute intestinal obstruction, perforative peritonitis
VII	10	Renal System Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing management of:-Acute Renal Failure, Chronic Renal Failure, Acute tubular necrosis, Bladder trauma Management Modalities: Hemodialysis, Peritoneal Dialysis, Continuous Ambulatory Peritoneal Dialysis, Continuous arterio
VIII	10	Nervous System Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing management of:-Common Neurological Disorders:-Cerebrovascular disease, Cerebrovascular accident, Seizure disorders, GuilleinBarre-Syndrome, Myasthenia Gravis, Coma, Persistent vegetative state, Encephalopathy, Head injury, Spinal Cord injury Management Modalities: Assessment of Intracranial pressure, Management of intracranial hypertension, Craniotomy Problems associated with neurological disorders: Thermo regulation, Unconsciousness, Herniation syndrome
IX	5	Endocrine System Causes, Pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing Management of :-Hypoglycemia, Diabetic Ketoacidosis, Thyroid crisis, Myxoedema, Adrenal crisis, Syndrome of Inappropriate/ hypersecretion of Antidiuretic Hormone (SIADH)
X	15	Management of other Emergency Conditions Mechanism of injury, Thoracic injuries, Abdominal injuries, pelvic fractures, complications of trauma, Head injuries Shock: Shock syndrome, Hypovolemic, Cardiogenic, Anaphylactic, Neurogenic and Septic shock Systemic inflammatory Response: The inflammatory response, Multiple organ dysfunction syndrome Disseminated Intravascular Coagulation Drug Overdose and Poisoning, Acquired Immunodeficiency Syndrome (AIDS)

Unit	Hours	Content
		Ophthalmic: Eye injuries, Glaucoma, retinal detachment Ear Nose Throat: Foreign bodies, stridor, bleeding, quincy, acute allergic conditions Psychiatric emergencies;, suicide, crisis intervention
XI	20	Cardiovascular emergencies Principles of Nursing in caring for patient's with Cardiovascular disorders Assessment: Cardiovascular system: Heart sounds, Diagnostic studies:- Cardiac enzymes studies, Electrocardiographic monitoring, Holter monitoring, Stress test. Echo cardiography, Coronary angiography, Nuclear medicine studies Causes, Pathophysiology, Clinical types, Clinical features, Diagnostic Prognosis, Management : Medical, Surgical & Nursing management of:-Hypertensive crisis, Coronary artery disease, Acute Myocardial infarction, Cardiomyopathy, Deep vein thrombosis, Valvular diseases, Heart block, Cardiac arrhythmias & conduction disturbances, Aneurysms, Endocarditis, Heart failure Cardio pulmonary resuscitation BCLS/ ACLS Management Modalities: Thrombolytic therapy, Pacemaker – temporary & permanent, Percutaneous transluminal coronary angioplasty, Cardioversion, Intra Aortic Balloon pump monitoring, Defibrillations, Cardiac surgeries, Coronary Artery Bypass Grafts (CABG/MICAS), Valvular surgeries, Heart Transplantation, Autologous blood transfusion, Radiofrequency Catheter Ablation
XII	15	Respiratory System Acid-base balance & imbalance Assessment : History & 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 Causes Pathophysiology, Clinical types, Clinical features, Prognosis, Management: Medical, Surgical and Nursing management of Common pulmonary disorders:-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 Management Modalities:-Airway Management Ventilatory Management:-Invasive, non- invasive, long term mechanical ventilations Bronchial Hygiene:-Nebulization, deep breathing exercise, chest physiotherapy, postural drainage, Inter Costal Drainage, Thoracic surgeries



Unit	Hours	Content
XIII	7	Burns Clinical types, classification, pathophysiology, clinical features, assessment, diagnosis, prognosis, Management: Medical, Surgical & Nursing management of burns Fluid and electrolyte therapy – calculation of fluids and its administration Pain management Wound care Infection control Prevention and management of burn complications Grafts and flaps Reconstructive surgery Rehabilitation
XIV	5	Obstetrical Emergencies Causes, Pathophysiology, Clinical types, clinical features, diagnostic Prognosis, Management: Medical, Surgical and Nursing management of : Antepartum haemorrhage, Preeclampsia, eclampsia, Obstructed labour and ruptured uterus, Post partum haemorrhage, Puerperal sepsis, Obstetrical shock
XV	10	Neonatal Paediatric emergencies Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of - Neonatal emergencies Asphyxia Neonatorum, Pathological Jaundice in Neonates, Neonatal seizures, Metabolic disorders, Intra cranial Hemorrhage, Neonatal Sepsis, RDS/HMD (Respiratory Distress Syndrome/Hyaline Membrane Disease), Congenital disorders:- - Cyanotic heart disease, tracheo oesophageal fistula, congenital hypertrophic pyloric stenosis, imperforate anus - Pediatric emergencies Dehydration, Acute broncho pneumonia, Acute respiratory distress syndrome, Poisoning, Foreign bodies, seizures, traumas, Status asthmaticus
XVI	2	Legal and ethical issues in critical care-Nurse's role Brain death Organ donation & Counselling Do Not Resuscitate(DNR) Euthanasia Living will
XVII	2	Quality assurance Standards, Protocols, Policies, Procedures Infection control; Standard safety measures Nursing audit Staffing Design of ICU/CCU

Practical

S.No.	Deptt./Unit	No. of Week	Total Hours
3	Burns ICU	2	60 Hours
5	Medical ICU	8	240 Hours
6	Surgical ICU	12	360 Hours
9	CCU	2	60 Hours
10	Emergency Department	3	90 Hours
12	Dialysis Unit	1	30 Hours
13	Transplant Room	2	60 Hours
14	Paediatric/ NICU	2	60 Hours
	Total	32 Weeks	960 Hours

ESSENTIAL CRITICAL CARE NURSING SKILLS

I. Procedures Observed

1. CT Scan
2. MRI
3. EEG
4. Hemodialysis
5. Endoscopic Retrograde cholangio Pancreaticogram(ERCP)
6. Heart/ Neuro /GI./ Renal Surgeries

II. Procedures Assisted

1. Advanced life support system
2. Basic cardiac life support
3. Arterial line/arterial pressure monitoring/blood taking
4. Arterial blood gas
5. ECG recording
6. Blood transfusion
7. IV cannulation therapy
8. Arterial Catheterization
9. Chest tube insertion
10. Endotracheal intubations
11. Ventilation
12. Insertion of central line/cvp line
13. Connecting lines for dialysis

III. Procedure Performed

1. Airway management
 - a. Application of oropharyngeal airway

- b. Oxygen therapy
 - c. CPAP (Continuous Positive Airway pressure)
 - d. Care of tracheostomy
 - e. Endotracheal extubation
2. Cardiopulmonary resuscitation, Basic cardiac life support, ECG
3. Monitoring of critically ill patients – clinically with monitors, capillary refill time (CRT) assessment of jaundice, ECG.
4. Gastric lavage
5. Assessment of critically ill patients
 - Identification & assessment of risk factors, Glasgow coma scale, and dolls eye movement, arterial pressure monitoring, cardiac output/pulmonary artery pressure monitoring, and detection of life threatening abnormalities
6. Admission & discharge of critically ill patients
7. Nutritional needs – gastrostomy feeds, pharyngeal feeds, jejunostomy feeds, TPN, formula preparation & patient education.
8. Assessment of patient for alteration in blood sugar levels monitoring blood sugar levels periodically & administering insulin periodically.
9. Administration of drugs: IM, IV injection, IV cannulation & fixation of infusion pump, calculation of dosages, use of insulin syringes/tuberculin, monitoring fluid therapy, blood administration.
10. Setting up dialysis machine and starting, monitoring and closing dialysis
11. Procedures for prevention of infections:
 - Hand washing, disinfection & sterilization surveillance, and fumigation universal precautions.
12. Collection of specimen.
13. Setting, use & maintenance of basic equipment, ventilator, O₂ analyzer, monitoring equipment, transducers, defibrillator, infusion & syringe pumps, centrifuge machine.

IV Other Procedures:

SUB SPECIALITY - ONCOLOGY NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth understanding in the field of oncology Nursing. It will help students to develop advanced skills for nursing intervention in various oncological conditions. It will enable the student to function as oncology nurse practitioner/specialist and provide quality care. It will further enable the student to function as educator, manager, and researcher in the field of oncology nursing

Objectives

1. Explain the prevention, screening and early detection of cancer
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of oncological disorders of various body systems
3. Describe the psychosocial effects of cancer on patients and families.
4. Demonstrate skill in administering/assisting in various treatment modalities used for patients with cancer
5. Apply nursing process in providing holistic care to patients with cancer.
6. Apply specific concepts of pain management
7. Appreciate the care of death and dying patients and value of bereavement support.
8. Describe the philosophy, concept and various dimensions of palliative care
9. Appreciate the role of alternative systems of medicine in care of cancer patients
10. Appreciate the legal & ethical issues relevant to oncology nursing
11. Recognize and manage Oncological emergencies
12. Counsel the patients with cancer and their families
13. Incorporate evidence based nursing practice and identify the areas of research in the field of oncology nursing
14. Recognize the role of oncology nurse practitioner as a member of oncology team
15. Collaborate with other agencies and utilize resources in caring for cancer patients
Teach and supervise nurses and allied health workers.
16. Design a layout and develop standards for management of oncology units/hospitals and nursing care.

Content outline

Unit	Hours.	Content
I	4	Introduction Epidemiology-Incidence, Prevalence – Global, National, State and Local Disease burden, concept of cancer, risk factors Historical perspectives Trends and issues Principles of cancer management Roles and responsibilities of oncology nurse
II	5	The Nature of Cancer Normal cell biology The Immune system Pathological and pathophysiological changes in tissues • Biology of the cancer cell • Clone formation Transformation • Tumor stem lines • Structure of a solid tumor • Products produced by the tumor • Systemic effects of tumor growth
III	4	Etiology of Cancer Carcinogenesis, Theories of cancer causation Risk factors Carcinogens – genetic factors, chemical carcinogens, radiation, viruses, Immune system failure, rapid tissue proliferation Hormone changes, diet, emotional factors.
IV	10	Diagnostic Evaluation Health assessment: History taking, physical examination, Staging and grading of tumors, TNM Classification Common diagnostic tests • Blood investigation: Haemetological, Bio-chemical, Tumor markers, Hormonal assay • Cytology: Fine needle aspiration cytology(FNAC) • Histopathology: Biopsy • Radiological assessment: MRI, Ultrasound, Computed tomography, Mammography, Positron emission tomography(PET), Radio nuclide imaging, Functional metabolism imaging • Endoscopies Nurses responsibilities in diagnostic measures

Unit	Hours.	Content
V	10	Levels of prevention and care Primary prevention – Guidelines for cancer detection, general measures, Warning signs of cancer, Self examination-Oral, Breast, Testicular Secondary prevention – early diagnosis. Screening Tertiary prevention – disability limitation, Rehabilitation :Mobility , Speech, Bowel and bladder, Ostomies etc Patient and family education, Discharge instruction, follow-up care and use of community resources.
VI	25	Cancer Treatment Modalities and Nurse's Role Surgery • Principles of surgical oncology • Current surgical strategy, • Determining surgical risk • Special surgical techniques • Pre-intra-postoperative nursing care • Acute and chronic surgical complications • Future directions and advances Chemotherapy • Principles and classification of chemotherapeutics • Pharmacology of antineoplastic drugs- Mechanism of action, Absorption, protein binding, Bio-transformation, excretion, common side effects, drug toxicity • Calculating drug doses, • Therapeutic response to chemotherapy-Tumor variables, drug resistance, • Safety precautions Radiation Therapy • Physics of radiotherapy • Types of ionizing rays • Radiation equipments: Linear accelerator, cobalt, Implants, Isotopes, • Types of therapies: Oral, Brachy therapy, tele therapy, selectron therapy • Effects of radiation on the body tissue, • Radiation biology – cell damage hypoxic cells, alteration of tumor kinetics. • Approaches to radiation therapy – • External radiotherapy • Internal radiotherapy – unsealed, • Sealed sources. • Effectiveness of radiotherapy-Radiosensitivity, treatment effects • Complications of radiotherapy • Radiation safety: Standards of Bhaba Atomic Research Centre(BARC)



Unit	Hours.	Content
VII	10	<i>Bone Marrow Transplantation /Stem Cell Transplantation</i> • Types, indications, transplantation procedure, complications and nursing management • Types and donor sources • Preparation and care of donor and recipient • Bone marrow bank • Legal and ethical issues <i>Immunotherapy (Biotherapy)</i> • Concepts and principles • Classification of agents • Treatment and applications <i>Gene Therapy</i> • Current Concepts and practices <i>Alternative and Complementary Therapies</i> • Current practices Pain management:- Theories, types and • Nature of cancer pain • Pathophysiology of pain • Pain threshold Assessment of pain • Principles of cancer pain control • Pharmacological: Opioid and non-opioid analgesic therapy • Patient controlled analgesia(PCA) • Other invasive techniques of pain control • Recent developments in Cancer pain
		Non- Pharmacological pain relief technique- • Complementary therapies(Music, massage, meditation, relaxation techniques, biofeed back etc) • Psychological intervention in pain control • Alternative system of medicines Role of nurse Palliative care Definition and scope, philosophy Concept and elements of palliative care Global and Indian perspective of palliative care Quality of life issues Communication skill Nursing perspective of palliative care and its elements Home care Hospice care Role of nurse in palliative care



Unit	Hours.	Content
IX	2	Infection control: • Process of infection, risk of hospitalization, nosocomial infections- prevention and control of infection in acute, long term care facility and community based care • Standard safety measures
X	30	Nursing Care of Patients With Specific Malignant Disorders Malignancies of G.I. system-oral, oesophagus, stomach, rectal, liver & pancreas, care of ostomies/stoma Respiratory malignancies Genito urinary system malignancies- prostate Bladder, renal testicular malignancies, Gynecological malignancies-cervix, uterus, ovary Hematological malignancies-Lymphomas, Leukemias. Malignancies of musculoskeletal system Endocrine malignancies Skin Head and Neck -brain tumors Other malignancies – Breast cancer, AIDS related Malignancies (Kaposi's Sarcoma)
XI	10	Paediatric malignancies Leukemia, Lymphoma, Neuro- blastoma Wilm's tumor, Soft tissue sarcoma, Retinoblastoma Nursing Management of children with Paediatric Malignancies
XII	15	Nursing Management of Physiological Conditions and Symptoms Of Cancer Patient <u>Nutrition:</u> - effects of cancer on nutritional Status and its consequences:-Anemia, Cachexia, Xerostomia, mucositis, Dysphagia , nausea and vomiting, constipation, diarrhoea, electrolyte imbalances, taste alterations Impaired mobility: Decubitus ulcer, pathologic fractures, thrombophlebitis, pulmonary embolism, contractures, footdrop Other symptoms Dyspepsia & hiccup, dyspnoea intestinal obstruction, Fungating wounds Anxiety & depression, insomnia Lymph edema Impact of cancer on sexuality: Effects of radiotherapy/ chemotherapy/surgery on sexuality of the cancer patient Nursing management of cancer patients experiencing sexual dysfunction Sexual counseling

Unit	Hours.	Content
XIII	10	Cancer Emergencies Disseminated intravascular coagulation(DIC), Malignant pleural effusion Neoplastic cardiac tamponade and septic shock spinal cord compression Superior venacava syndrome Metabolic emergency: hyper and hypo calcemia Surgical emergency Urological emergency Hemorrhage Organ obstruction Brain metastasis Nurses role in managing oncologic emergencies
XIV	8	Psycho-Social Aspects of Nursing Care Psychological responses of patients with cancer Psychosocial assessment – Crisis intervention, coping mechanisms Stress management, spiritual/cultural care and needs Counseling: individual and family Maximizing quality of life of patient and family Ethical, moral and legal issues- End of life care Grief and grieving process Bereavement support Care of Nurses who care for the dying.
XV	2	Layout and Design of an oncology institution/ ward, OPD, chemotherapy unit, Bone marrow transplantation unit, Pain clinic etc Practice Standards of oncology nursing • Policies and Procedures Establishing Standing orders and Protocols Quality Assurance Programme in oncology units Nursing audit

Clinical Experience

S. No.	Deptt./ Unit	No. of Week	Total Hours
1	Medical Oncology ward	6	180 Hours
2	Surgical Oncology ward	6	180 Hours
3	Bone marrow transplantation Unit	2	60 Hours
4	Operation Theatre	2	60 Hours
5	Radiotherapy Unit	2	60 Hours
6	Chemotherapy Unit	4	120 Hours
7	Out patient department and pain clinic	2	60 Hours
8	Pediatric Oncology ward	2	60 Hours
9	Palliative Care ward	2	60 Hours
10	Community oncology	2	60 Hours
11	Hospice	1	30 Hours
12	Other field visits	1	30 Hours
	Total	32 Weeks	960 Hours

Procedures Observed

1. CT Scan
2. MRI
3. PET Scan(Positron Emission Tomography)
4. Ultra sound
5. Mammography
6. Radio Nuclide Imaging
7. Bone Scan
8. Thyroid Function Test
9. Functional and Metabolic Imaging
10. Transportation of radioactive materials
11. Others

Procedures Assisted

1. IV cannulation – Open method
2. Chemotherapy
3. Radiotherapy – Brachytherapy – Low Density Radiation, High Density Radiation.
4. Interstitial implantation
5. Bio-therapy and Gene therapy
6. Teletherapy – Treatment planning
7. Bone marrow aspiration and biopsy
8. Biopsy – tissue
9. FNAC – Fine Needle Aspiration Cytology and biopsy
10. Advance Cardiac life support
11. Endotracheal intubation
12. Defibrillation Ventilation
13. Tracheostomy
14. Thoracentesis
15. Paracentesis
16. Lumbar Puncture
17. Arterial Blood Gas
18. Nerve Block

19. Chest tube insertion
20. Intercostal drainage
21. CVP monitoring

Procedure Performed

1. Screening for cancer
2. Assessment of pain
3. Assessment of Nutritional status
4. Care of Tracheostomy
5. Endotracheal intubation
6. Gastric gavage
7. Pap smear
8. IV cannulation
9. Care of surgical flaps
10. Care of ostomies
11. Blood transfusion and component therapy
12. Counseling
13. Practice standard safety measures
14. Care of dead body and mortuary formalities

Other procedures

(As per the institutional protocol):

1. Alternative therapies

SUB SPECIALITY - NEUROSCIENCES NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth knowledge in the field of neurology and neurosurgical Nursing. It will help students to develop advanced skills for nursing intervention in caring for patients with neurological and neurosurgical disorders. It will enable the student to function as neuroscience nurse practitioner/ specialist. It will further enable the student to function as educator, manager and researcher in the field of neurology and neurosurgical Nursing.

Objectives

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

1. Appreciate trends and issues related to neurology and neurosurgical Nursing.
2. Review the anatomy and physiology of nervous system
3. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of patients with neurological and neurosurgical disorders
4. Perform neurological assessment and assist in diagnostic procedures
5. Describe the concepts and principles of neuroscience nursing
6. Describe the various drugs used in neurosciences and nurses responsibility
7. Assist in various therapeutic and surgical procedures in neuroscience nursing
8. Demonstrate advance skills/competence in managing patients with neurological and neurosurgical disorder following nursing process approach
9. Identify psychosocial problems of patients with disabilities and assist patients and their family to cope with emotional distress, spiritual, grief and anxiety
10. Participate in preventive, promotive and rehabilitative services for neurological and neurosurgical patients.
11. Explain the legal and ethical issues related to brain death, organ transplantation and practice of neuroscience nursing
12. Incorporate evidence based nursing practice and identify the areas of research in the field of neuroscience nursing.
13. Organize and conduct inservice education program for nursing personnel.
14. Develop standards of care for quality assurance in neuroscience nursing practice
15. Identify the sources of stress and manage burnout syndrome among health care providers.
16. Teach and supervise nurses and allied health workers.
17. Plan and develop physical layout of neuro intensive care unit

Course Content

Unit	Hours	Content
I	5	Introduction Introduction to neuroscience(neurological and neurosurgical) nursing • History-Development in neurological and neurosurgical nursing, Service & education • Emerging trends and issues in neurology and neuro surgery and its implication to nursing. • neurological and neurosurgical problems – • Concepts, principles and nursing perspectives • Ethical and legal issues • Evidence based nursing and its application in neurological and neurosurgical nursing
II	5	Epidemiology Major health problems- Risk factors associated with neurological conditions- Hereditary, Psychosocial factors, smoking, alcoholism, dietary habits, cultural and ethnic considerations, occupational and infections. Health promotion, disease prevention, life style modification and its implications to nursing Alternate system of medicine/complementary therapies
III	10	Review of Anatomy and physiology Embryology Structure and functions of Nervous system- CNS, ANS, cereberal circulation , cranial and spinal nerves and reflexes, motor and sensory functions Sensory organs

Unit	Hours	Content
IV	15	Assessment and diagnostic measures Assessment • History taking • Physical assessment, psychosocial assessment • Neurological assessments, Glasgow coma scale interpretation & its relevance to nursing. • Common assessment abnormalities Diagnostic measures • Cerebro spinal fluid analysis • Radiological studies-Skull and spine X-ray Cerebral Angiography, CT Scan, Single Photon Emission Computer Tomography(SPECT), MRI (Magnetic Resonance Imaging), MRA, MRS, Functional MRI, Myelography, PET (Positron Emission Test), Interventional radiology. • Electorgraphic studies- Electro encephalo graphy, MEG, EMG, video EEG, • Nerve conduction studies-Evoked potentials, visual evoked potentials, brain stem auditory evoked potentials, somatosensory evoked potentials • Ultrasound studies-Carotid duplex, transcranial Doppler sonography, • Immunological studies • Biopsies – muscle, nerve and Brain. Interpretation of diagnostic measures
V	5	Nurse's role in diagnostic tests Meeting Nutritional needs of neurological patients Basic nutritional requirements Metabolic changes following injury and starvation Nutritional assessment Common neurological problems that interfere with nutrition and strategies for meeting their nutritional needs Special metabolic and electrolyte imbalances Chronic fatigue syndrome
VI	5	Drugs used in neurological and neurosurgical disorders Classification Indications, contraindications, actions and effects, toxic effects Role of nurse



Unit	Hours	Content
VII	10	Traumatic conditions. Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and Nursing management of • Cranio cerebral injuries. • Spinal & Spinal cord injuries. • Peripheral nerve injuries. • Unconsciousness
VIII	10	Cerebro vascular disorders. Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and Nursing management of • Stroke & arterio venous thrombosis. • Haemorrhagic embolus. • Cerebro vascular accidents. • Intracranial aneurysm. • Subarchnoid Haemorrhage. • Arterio venous fistula. • Brain tumours Diseases of cranial nerves; Trigeminal neuralgia, Facial palsy, Bulbar palsy.
IX	10	Degenerating and demyelinating disorders Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis, Management: medical, surgical and Nursing management of • Motor neuron diseases. • Movement disorders- Tics, dystonia, chorea, Wilson's disease, essential tremors • Dementia. • Parkinson's disease. • Multiple sclerosis. • Alzheimer's
X	10	Neuro infections Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis, Management: medical, surgical and Nursing management of Neuro infections • Meningitis-types • Encephalitis. • Poliomyelitis. • Parasitic infections. • Bacterial infections • Neurosyphilis. • HIV & AIDS. • Brain abscess.

Unit	Hours	Content
XI	10	Paroxysmal disorders. Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis , Management: medical, surgical and Nursing management of • Epilepsy and seizures. • Status epilepticus. • Syncope. • Menier's syndrome. • Cephalgia.
XII	10	Developmental disorders. Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of • Hydrocephalus. • Craniosynostosis. • Spina bifida- Meningocele, Meningomyelocele encephalocele • syringomyelia. • Cerebro vascular system anomalies. • Cerebral palsies. • Down's syndrome
XIII	10	Neuro muscular disorders. Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of • Polyneuritis – G B Syndrome. • Muscular dystrophy. • Myasthenia gravis. • Trigeminal neuralgia. • Bell's palsy. • Menier's disease • Carpal tunnel syndrome • Peripheral neuropathies
XIV	5	Neoplasms – surgical conditions. Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of • Space occupying lesions -types • Common tumors of CNS,
XV	5	Other disorders Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of Metabolic disorders- diabetes, insipidus, metabolic encephalopathy Sleep disorders Auto immune disorders- multiple sclerosis, inflammatory myopathies



Unit	Hours	Content
XVI	10	Neuro emergencies Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of • Increased intracranial pressure • Unconscious • Herniation syndrome • Seizures • Severe head injuries • Spinal injuries • Cerebro vascular accidents
XVII	5	Rehabilitation. Concept and Principles of Rehabilitation. Factors affecting quality of life and coping Rehabilitation in acute care setting, and following stroke, head injury and degenerative disorders of brain Physiotherapy. Counselling Care giver's role
XVIII	5	Speech & Language.- Neurogenic communication disorders, Speech therapy Ethical and legal issues in neuroscience nursing Brain death and organ transplantation Euthanasia Negligence and malpractice Nosocomial infections
XIX	5	Quality assurance in neurological nursing practice Role of advance practitioner in neurological nursing Professional practice standards Quality control in neurologic nursing Nursing audit Neuro ICU • Philosophy, aims and objectives • Policies, staffing pattern, design and physical plan of neuro ICU • Team approach, functions • Psychosocial aspects in relation to staff and clients of neuro ICU, • In-service education

Practical

S.No.	AREA OF POSTING	No. of Week	Total Hours
1	O.P.D.	2	60
2	Casualty	2	60
3	Diagnostics	2	60
4	Neuro psychiatry	1	30
5	Neuro Medical wards	4	120
6	Paediatric Neuro ward	2	60
7	Neuro surgical wards	4	120
8	Head Injury ward	3	90
9	ICU- neuro medicine	4	120
10	I.C.U.- neuro surgical	4	120
11	Rehabilitation	2	60
12	Operation Theatre	2	60
	Total	32 Weeks	960 Hours

ESSENTIAL NEURO NURSING SKILLS

I. Procedures Observed

1. CT scan
2. MRI
3. PET
4. EEG
5. EMG
6. Sleep pattern studies/Therapy
7. Radiographical studies
8. Neuro surgeries
9. Nerve conduction studies
10. Ultrasound studies
11. Any other

II. Procedures Assisted

1. Advanced Cardiac life support
2. Lumbar Puncture
3. Biopsies – muscle, nerve and Brain
4. Arterial Blood Gas
5. ECG Recording
6. Blood transfusion
7. IV cannulation – open method

8. Endotracheal intubation
9. Ventilation
10. Tracheostomy
11. ICP monitoring
12. Gama Knife
13. Cerebral angiography
14. Myelography
15. Neuro surgeries

III. Procedures Performed:

1. Airway management
 - a. Application of Oro Pharyngeal Airway
 - b. Care of Tracheostomy
 - c. Conduct Endotracheal Intubation
 - d. use of AMBU bag, artificial respirators
 - e. Setting of Ventilators and Care of patients on ventilators
2. Cardio Pulmonary Resuscitation -Defibrillation
3. Neurological assessment -Glasgow coma scale
4. Gastric Lavage
5. IV Cannulation
6. Administration of emergency IV Drugs, fluid
7. Care of patients with incontinence, bladder training
Catheterization
8. Care of patients on traction related to the neurological conditions
9. Blood Administration.
10. Muscle strengthening exercises
11. Guidance and counseling
12. Monitoring – management and care of monitors.

IV. Other Procedures:

SUB SPECIALITY - NEPHRO-UROLOGY NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth understanding in the field of Nephro and urological Nursing. It will help students to develop advanced skills for nursing intervention in various nephro and urological conditions. It will enable the student to function as nephro and urology nurse practitioner/specialist and provide quality care. It will further enable the student to function as educator, manager, and researcher in the field of nephro and urology nursing

Objectives

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

1. Appreciate trends and issues related to **nephro and urological** nursing
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of **nephro and urological** conditions
3. Perform physical, psychosocial & spiritual assessment
4. Assist in various diagnostic, therapeutic and surgical interventions
5. Provide comprehensive nursing care to patients with **nephro and urological conditions**
6. Describe the various drugs used in **nephro and urological** conditions and nurses responsibility
7. Demonstrate skill in handling various equipments/gadgets used for patients with **nephro and urological** conditions
8. Appreciate team work & coordinate activities related to patient care.
9. Practice infection control measures.
10. Identify emergencies and complications & take appropriate measures
11. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs
12. Discuss the legal and ethical issues in **nephro and urological** nursing
13. Identify the sources of stress and manage burnout syndrome among health care providers Appreciate the role of alternative system of medicine in the care of patient
14. Incorporate evidence based nursing practice and identify the areas of research in the field of **nephro and urological** nursing
15. Teach and supervise nurses and allied health workers.
16. Design a layout of kidney transplant unit and dialysis unit
17. Develop standards of nephro urological nursing practice

Course Content

Unit	Hours	Content
I	5	Introduction Historical development: trends and issues in the field of nephro and urological nursing. nephro and urological problems Concepts, principles and nursing perspectives Ethical and legal issues Evidence based nursing and its application in nephro and urological nursing(to be incorporated in all the units)
II	5	Epidemiology Major health problems- urinary dysfunction, urinary tract infections, Glomerular disorders, obstructive disorders and other urinary disorders. Risk factors associated with nephro and urological conditions conditions- Hereditary, Psychosocial factors, smoking, alcoholism, dietary habits, cultural and ethnic considerations. Health promotion, disease prevention, life style modification and its implications to nursing Alternate system of medicine/complementary therapies
III	5	Review of anatomy and physiology of urinary system Embryology Structure and functions Renal circulation Physiology of urine formation Fluid and electrolyte balance Acid base balance Immunology specific to kidney
IV	20	Assessment and diagnostic measures History taking Physical assessment, psychosocial assessment Common assessment abnormalities- dysurea, frequency, enuresis, urgency, hesitancy, hematuria, pain, retention, burning on urination, pneumaturia, incontinence, nocturia, polyurea, anuria, oliguria, Diagnostic tests-urine studies, blood chemistry, radiological procedures-KUB, IVP, nephrotomogram, retrograde pyelogram, renal arteriogram, renalultrasound, CT scan, MRI, cystogram, renal



Unit	Hours	Content
		scan, biopsy, endoscopy- cystoscopy, urodynamics studies- cystometrogram, urinary flow study, sphincter electromyography, voiding pressure flow study, videourodynamics, Whitaker study Interpretation of diagnostic measures Nurse's role in diagnostic tests
V	5	Renal immunopathy/Immunopathology General Concept of immunopathology Immune mechanism of glomerular vascular disease Role of mediator systems in glomerular vascular disease
VI	15	Urological Disorders and Nursing Management Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical, surgical and nursing management of Urinary tract infections- pyelonephritis, lower urinary tract infections, Disorders for ureters, bladder and urethra Urinary tract infections- Urinary dysfunctions- urinary retention, urinary incontinence, urinary reflux, Bladder disorders- neoplasms, calculi, neurogenic bladder, trauma, congenital abnormalities Benign prostatic hypertrophy(BPH) Ureteral disorders: ureteritis, ureteral trauma, congenital anomalies of ureters Urethral disorders- tumours, trauma, congenital anomalies of ureters,
VII	25	Glomerular disorders and nursing management Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical, surgical and nursing management of Glomerular nephritis- chronic, acute, nephritic syndrome Acute Renal failure and chronic renal failure. Renal calculi Renal tumours-benign and malignant Renal trauma Renal abscess Diabetic nephropathy Vascular disorders Renal tuberculosis Polycystic Congenital disorders Hereditary renal disorders
VIII	10	Management of Renal emergencies Anuria Acute Renal failure Poisoning Trauma Urine retention



Unit	Hours	Content
		Acute graft rejection Hematuria Nurse's role
IX	10	Drugs used in urinary disorders Classification Indications, contraindications, actions and effects, toxic effects Role of nurse
X	10	Dialysis Dialysis- Historical, types, Principles, goals • Hemodialysis- vascular access sites- temporary and permanent • Peritoneal dialysis Dialysis Procedures- steps, equipments, maintenance, Role of nurse- pre dialysis, intra and post dialysis Complications- Counseling patient education
XI	10	Records and reports Kidney transplantation Nursing management of a patient with Kidney transplantation Kidney transplantations- a historical review Immunology of graft rejections The recipient of a renal transplant Renal preservations Human Leucocytic Antigen(HLA) typing matching and cross matching in renal transplantation Surgical techniques of renal transplantations Chronic renal transplant rejection Complication after KTP: Vascular and lymphatic, Urological, cardiovascular, liver and neurological, infectious complication KTP in children and management of pediatric patient with KTP KTP in developing countries Results of KTP Work up of donor and recipient for renal transplant Psychological aspect of KTP and organ donations Ethics in transplants
XII	5	Cadaveric transplantation Rehabilitation of patient with nephrological problems Risk factors and prevention Rehabilitation of patients on dialysis and after kidney transplant Rehabilitation of patients after urinary diversions
XIII	10	Family and patient teaching Pediatric urinary disorders Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical, surgical and nursing management of children with Renal Diseases -UTI, ureteral reflux, glomerulonephritis, nephrotic syndrome infantile nephrosis, cystic kidneys, familial factors in renal diseases in childhood, Haemolytic uraemic

Unit	Hours	Content
XIV	5	syndrome. Benign recurrent haematuria, nephropathy, Wilms' tumour Critical care units- dialysis , KTP unit Philosophy, aims and objectives Policies, staffing pattern, design and physical plan of Dialysis and KTP units Team approach, functions Psychosocial aspects in relation to staff and clients of ICU, dialysis unit In-service education
XV	5	Ethical and legal issues Quality assurance in nephrological nursing practice Role of advance practitioner in nephrological nursing Professional practice standards Quality control in nephrological nursing Nursing audit

Practicals

S. No.	Deptt./ Unit	No. of Week	Total Hours
1	Nephrology Ward	6	180 Hours
2	Pediatrics	2	60 Hours
3	Critical Care Unit	2	60 Hours
4	Urology Ward	6	180 Hours
5	Dialysis Unit	4	120 Hours
6	Kidney Transplantation Unit	2	60 Hours
7	URO OT	2	60 Hours
8	Emergency Wards	2	60 Hours
9	Uro Nephro OPDs	4	120 Hours
10	Diagnostic Labs	2	60 Hours
	Total	32 Weeks	960 Hours

Procedures observed

I. Procedures Observed

1. CT Scan
2. MRI
3. Radiographic studies
4. Urodynamics
5. Hemodialysis
6. Renal Surgeries

II. Procedures Assisted

1. Blood transfusion
2. I V cannulation therapy
3. Arterial Catheterization
4. Insertion of central line/cvp line
5. Connecting lines for dialysis
6. Peritoneal dialysis
7. Renal biopsy
8. Endoscopies- Bladder, urethra

III. Procedure Performed

1. Health assessment
2. Insertion of urethral and suprapubic catheters
3. Urine analysis
4. Catheterization
5. Peritoneal dialysis
6. Bladder irrigation
7. Care of ostomies
8. Care of urinary drainage
9. Bladder training
10. Care of vascular access
11. Setting up dialysis machine and starting, monitoring and closing dialysis
12. Procedures for prevention of infections:
13. Hand washing, disinfection & sterilization surveillance, and fumigation universal precautions.
14. Collection of specimen.
15. Administration of drugs: IM, IV injection, IV cannulation & fixation of infusion pump, calculation of dosages, blood administration. monitoring -fluid therapy, electrolyte imbalance,
16. Nutritional needs, diet therapy & patient education.
17. Counselling

IV. OTHER PROCEDURES:

SUB SPECIALITY - ORTHOPEDIC NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth understanding in the field of orthopedic nursing. It will help students to develop advanced skills for nursing intervention in various orthopedic conditions. It will enable the student to function as orthopedic nurse practitioner/specialist providing quality care. It will further enable the student to function as educator, manager, and researcher in the field of orthopedic nursing.

Objectives

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

1. Appreciate the history and developments in the field of orthopedic nursing
2. Identify the psycho-social needs of the patient while providing holistic care.
3. Perform physical and psychological assessment of patients with orthopedic conditions and disabilities.
4. Describe various disease conditions and their management
5. Discuss various diagnostic tests required in orthopedic conditions
6. Apply nursing process in providing care to patients with orthopedic conditions and those requiring rehabilitation.
7. Recognize and manage orthopedic emergencies.
8. Describe recent technologies and treatment modalities in the management of patients with orthopedic conditions and those requiring rehabilitation.
9. Integrate the concept of family centered, long term care and community based rehabilitation to patients with orthopedic conditions.
10. Counsel the patients and their families with orthopedic conditions
11. Describe various orthotic and prosthetic appliances
12. Appreciate the legal and ethical issues pertaining to patients with orthopedic conditions and those requiring rehabilitation.
13. Appreciate the role of alternative system of medicine in care of patients with orthopedic conditions
14. Incorporate evidence based nursing practice and identify the areas of research in the field of orthopedic nursing.
15. Recognize the role of orthopedic nurse practitioner and as a member of the orthopedic and rehabilitation team.
16. Teach orthopedic nursing to undergraduate students and in-service nurses.
17. Prepare a design and layout of orthopedic and rehabilitative units.

Course Content

Unit	Hours	Content
I	5	Introduction Historical perspectives – History and trends in orthopedic nursing Definition and scope of orthopedic nursing Anatomy and physiology of Musculo-skeletal system Posture, Body landmarks Skeletal system Muscular system. Nervous system - Main nerves Healing of - Injury, bone injury, Repair of ligaments Systemic response to injury Ergonomics, Body mechanics, biomechanical measures Orthopedic team
II	8	Assessment of Orthopedic Patient Health Assessment: History, physical examination- Inspection, palpation, movement, Measurement, muscle strength Testing. Diagnostic studies – Radiological studies, Muscle enzymes, serologic studies
III	10	Care of patients with devices Splints, braces, various types of plaster cast Various types of tractions, Various types of orthopedic beds and mattresses Comfort devices Implants in orthopedic Prosthetics and Orthotics
IV	15	Injuries Trauma & Injuries Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and nursing management of : • Early management of Trauma • Fractures • Injuries of the Shoulder and arm Elbow, fore arm, wrist, hand Hip, thigh, knee, leg, ankle, foot Spine

Unit	Hours	Content
		Head injury Chest injury • Polytrauma • Nerve injuries • Vascular injuries • Soft tissue injuries • Sports injuries • Amputation
V	8	Infections of Bones and Joints Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and nursing management of : • Tuberculosis • Osteomyelitis • Arthritis • Leprosy
VI	5	Bone Tumours Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and nursing management of: • Bone tumors – Benign, Malignant and metastatic • Different types of therapies for tumors
VII	10	Deformities Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis – medical surgical and nursing management of: Scoliosis, Kyphosis, Lordosis Congenital disorders: Congenital dislocation of hip(CDH), Dislocation of patella, knee, Varus and valgus deformities, Deformities of digits, Congenital torticollis. Meningocele, meningomyelocele, spina bifida, Chromosomal disorders. Computer related deformities
VIII	5	Disorders of the spine Intervertebral disc prolapse, Fracture of the spine Low back disorder – Low back pain, PND, spinal stenosis, spondylosis
IX	5	Nutritional/Metabolic and Endocrine Disorders Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, medical surgical and nursing management of: • Rickets, • Scurvy, • Hyper vitaminosis A and D, • Osteomalacia,



Unit	Hours	Content
		• Osteoporosis • Paget's disease, • gout, • Gigantism, • Dwarfism, • Acromegaly, • Therapeutic diets for various orthopedic disorders
X	8	Neuro-Muscular Disorders: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, medical surgical and nursing management of: • Poliomyelitis, Cerebral Palsy • Myasthenia gravis • Spina bifida. • Peripheral nerve lesion, • Paraplegia, Hemiplegia, Quadriplegia. • Muscular dystrophy
XI	8	Chronic/Degenerative Diseases of Joints and Autoimmune Disorders: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis – medical surgical and nursing management of: • Osteo Arthritis • Rheumatoid Arthritis • Ankylosing spondylitis. • Spinal disorders. • Systemic Lupus Erythematosus
XII	5	Orthopedic Disorders in Children: General and special consideration on pediatric orthopedics Genetic disorders Congenital anomalies Growth disorders Genetic counseling Nurses role in genetic counseling
XIII	5	Geriatric Problems Geriatric population, types of disabilities, causes, treatment and Management – Hospitalization, rest, physiotherapy, involvement of family members, social opportunities. Care at home – involvement of family and community, follow up care and rehabilitation
XIV	6	Pharmacokinetics Principles of drug administration Analgesics and anti inflammatory agents Antibiotics, Antiseptics, Drugs used in orthopedics and neuromuscular disorders Blood and blood components Care of drugs and nurses role

Unit	Hours	Content
XV	30	Nurses Role in Orthopedic Conditions Gait analysis Urodynamic studies Prevention of physical deformities Alteration of body temperature regulatory system and immune systems Immobilization – cast, splints, braces and tractions Prevention and care of problems related to immobility Altered sleep patterns Impaired communication Self care and activities of daily living Bladder and bowel rehabilitation Sensory function rehabilitation Psychological reaction related to disabilities and disorders. Coping of individual and family with disabilities and disorders Maintaining sexuality Spirituality – A rehabilitative prospective Orthopedic Reconstructive Surgeries Replacement surgeries – Hip, Knee, Shoulder Spine surgeries Grafts and flaps surgery Deformity correction. Physiotherapy Concepts, Principles, purpose, • Mobilization – Exercises: types, re-education in walking: Crutch walking, wheel chair, Transfer techniques, • Types of gaits: Non-weight bearing, partial weight bearing, four point crutch, tripod, walking with sticks, calipers • Forms of therapies: Hydrotherapy, electrotherapy, wax bath, heat therapy, ice, helio therapy, radiant heat, • Chest physiotherapy
XVI	8	Rehabilitation Principles of rehabilitation, definition, philosophy, process, Various types of therapies Special therapies and alternative therapies Rehabilitation counseling Preventive and restorative measures. Community based rehabilitation (CBR) Challenges in rehabilitation. Role of the nurse in rehabilitation, Legal and ethical issues in rehabilitation nursing Occupational therapy
XVII	5	National Policies and Programmes National programmes for rehabilitation of persons with disability - National Institutes, artificial limbs manufacturing Corporation, District Rehabilitation Centers and their schemes Regional rehabilitation centers etc.

Unit	Hours	Content
		Public policy in rehabilitation nursing The persons with disabilities act 1995, Mental rehabilitation and Multiple disabilities act 1992, The National Trust Rules 1999 and 2000 Rehabilitation Council of India Legal and ethical aspects in orthopedic nursing Rehabilitation health team and different categories of team members.
XVIII	4	Quality assurance Standards, Protocols, Policies, Procedures Nursing audit Staffing Design of orthopedic, physiotherapy and rehabilitation unit

Practicals

1. Clinical practice in Orthopedic, physiotherapy and Rehabilitation Units.
2. Application of tractions and plaster casts and removal of tractions and plaster casts and other appliances.
3. Apply Theories and Nursing Process in the management of patients with orthopedic conditions.
4. Provide various types of physical and rehabilitative therapies
5. Provide health education on related disease conditions.
6. Unit management and plan - designing

Clinical Experience

S. No.	Deptt./Unit	No. of Week	Total Hours
1	Orthopedic Ward	8	240 Hours
2	Orthopedic Operation theatre	4	120 Hours
3	Neurosurgical Ward	2	60 Hours
4	Orthopedic O.P.D.	4	120 Hours
5	Casualty/Emergency and Trauma	4	120 Hours
6	Rehabilitation Units	2	60 Hours
7	Physiotherapy Unit	4	120 Hours
8	Paediatric /paediatric surgery unit	2	60 Hours
9	Field Visit	2	60 Hours
	Total	32 Weeks	960 Hours

Procedures Observed

1. X Ray
2. Ultrasound
3. MRI
4. C T Scan/bone scan
5. Arthroscopy
6. Electrothermally – assisted capsule shift or ETAC
(Thermal capsulorrhaphy)
7. Fluoroscopy
8. Electromyography
9. Myelography
10. Discography
11. Others

Procedures Assisted

1. Blood Transfusion
2. IV cannulation and therapy
3. Ventilation
4. Various types of tractions
5. Orthopedic surgeries – Arthrocentesis, Arthroscopy, Bone lengthening, Arthrodesis, grafting, Fractures fixation, reconstructive, reimplantation, replantation, spinal decompression, transplantation of bone, muscle or articular cartilage, autografting, allografting.
6. Injection – Intra articular, intra osseous.
7. Advance Life Support

Peocedures Performed

1. Interpretation of X ray films.
2. Application and removal of splints, casts, and braces.
3. Care of tractions – skin and skeletal traction, pin site care.
4. Cold therapy.
5. Heat therapy
6. Hydrotherapy
7. Therapeutic exercises
8. Use of TENS (Transcutaneous electrical nerve stimulation)
9. Techniques of transportation
10. Crutch walking, walkers, wheel chair.
11. Use of devices for activities of daily living and prevention of deformities.
12. Administration of drugs: IV injection, IV cannulation, and Blood transfusion.
13. Procedures for prevention of infections: disinfection and sterilization, surveillance, fumigation.
14. Special skin/ part preparations for orthopedic surgeries.
15. Surgical dressings – Debridement.
16. Bladder and bowel training

Other Procedures

SUB SPECIALITY - GASTRO ENTEROLOGY NURSING

Course Description

This course is designed to assist students in developing expertise and in-depth understanding in the field of gastro enterology Nursing. It will help students to develop advanced skills for nursing intervention in various gastro enterology conditions. It will enable the student to function as gastro enterology nurse practitioner/specialist and provide quality care. It will further enable the student to function as educator, manager, and researcher in the field of gastro enterology nursing

Objectives

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

1. Appreciate trends and issues related to gastro enterology nursing.
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of gastrointestinal conditions
3. Participate in national health programs for health promotion, prevention and rehabilitation of patients with gastrointestinal conditions
4. Perform physical, psychosocial & spiritual assessment
5. Assist in various diagnostic, therapeutic and surgical procedures
6. Provide comprehensive care to patients with gastrointestinal conditions
7. Describe the various drugs used in gastrointestinal conditions and nurses responsibility
8. Demonstrate skill in handling various equipments/gadgets used for patients with gastrointestinal conditions
9. Appreciate team work & coordinate activities related to patient care.
10. Practice infection control measures.
11. Identify emergencies and complications & take appropriate measures
12. Assist patients and their family to cope with emotional distress, grief, anxiety and spiritual needs
13. Discuss the legal and ethical issues in GE nursing
14. Identify the sources of stress and manage burnout syndrome among health care providers
15. Appreciate the role of alternative system of medicine in care of patient
16. Incorporate evidence based nursing practice and identify the areas of research in the field of gastrointestinal nursing
17. Teach and supervise nurses and allied health workers.
18. Design a layout of Gastro enterology intensive care unit (GEICU) , liver care/transplant unit

Course Content

Unit	Hours	Content
I	5	Introduction Historical development: trends and issues in the field of gastro enterology. Gastro enterological problems Concepts, principles and nursing perspectives Ethical and legal issues Evidence based nursing and its application in gastrointestinal nursing(to be incorporated in all the units)
II	5	Epidemiology Risk factors associated with GE conditions- Hereditary, Psychosocial factors, smoking, alcoholism, dietary habits, cultural and ethnic considerations Health promotion, disease prevention, life style modification and its implications to nursing National health programmes related to gastro enterology Alternate system of medicine/complementary therapies
III	5	Review of anatomy and physiology of gastrointestinal system Gastrointestinal system Liver, biliary and pancreas Gerontologic considerations Embryology of GI system Immunology specific to GI system
IV	15	Assessment and diagnostic measures History taking Physical assessment, psychosocial assessment Diagnostic tests • Radiological studies: Upper GIT- barium swallow, lower GIT- Barrium enema, • Ultra sound: • Computed tomography • MRI • Cholangiography: Percutaneous transheptatic Cholangiogram (PTC) • Magnetic Resonance Cholangio pancreotography (MRCP) • Nuclear imaging scans(scintigraphy) • Endoscopy



Unit	Hours	Content
		• Colonoscopy • Proctosigmoidoscopy • Endoscopic Retrograde Cholangio pancreotography (ERCP) • Endoscopic ultrasound • Peritonoscopy (Laproscopy) • Gastric emptying studies • Blood chemistries: Serum amylase, serum lipase • Liver biopsy • Miscellaneous tests: Gastric analysis, fecal analysis • Liver function tests: Bile formation and excretion, dye excretion test, Protein metabolism, haemostatic functions- prothrombin vitamin K production, serum enzyme tests, Lipid metabolism- serum cholesterol Interpretation of diagnostic measures Nurse's role in diagnostic tests
V	25	Gastro intestinal disorders and nursing management Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical , surgical and nursing management of • Disorders of the mouth: Dental caries, Peridontal disease, Acute tooth infection, Stomatitis, Thrush (moniliasis),Gingivitis, Leukoplakia, Inflammation of the parotid gland, Obstruction to the flow of saliva, Fracture of the jaw • Disorders of the oesophagus: Reflux oesophagitis, Oesophageal achalasia, Oesoophageal varices, Hiatus hernia, Diverticulum • Disorders of the stomach and duodenum: Gastritis, Peptic ulcer, Dumping of the stomach, Food poisoning, idiopathic gastroparesis, Aerophagia and belching syndrome, Ideopathic cyclic nausea and vomiting, Rumination syndrome, Functional dyspepsia, Chronic Non specific (functional) abdominal pain • Disorders of the small intestine - Malabsorption syndrome – tropical sprue - Gluten – sensitive enteropathy (Coeliac disease) - Inflammatory diseases of intestines and abdomen,; appendicitis, Peritonities, Intestinal obstruction, Abdominal TB, Gastrointestinal polyposis syndrome - Chronic inflammatory bowel disease, Ulcerative colites, Crohn's disease - Infestations and infections – Worm infestations, Typhoid, Leptospirosis - Solitary rectal ulcer syndrome - Alteration in bowel elimination (diarrhoea, constipation, fecal impaction, fecal incontinence, Irritable bowel syndrome, Chronic idiopathic constipation, Functional diarrhoea Anorectal Conditions: Hemorrhoids, Anal fissure, Anal fistula, Abscess, Strictures, Rectal prolapse, Pruritis ani, Pelonidal disease, Anal condylomas, Warts



Unit	Hours	Content
VI	15	Disorder of liver, pancreas gall bladder and nursing management Disorders of liver biliary tract: Viral Hepatitis – A, B, C, D & E Toxic hepatitis • Cirrhosis of liver, liver failure, Liver transplantation • Non cirrhotic portal fibrosis • Liver abscess,; • Parasitic and other cysts of the liver • Disorders of the Gall Bladder and Bile Duct: Cholecystitis Cholelithiasis Choledocholithiasis Disorders of the pancreas: Pancreatitis, Benign tumors of islet cells Disorders of the Peritoneum • Infections of the peritoneum Surgical peritonitis Spontaneous bacterial peritonitis Tuberculosis peritonitis Disorders of the Diaphragm • Diaphragmatic hernia • Congenital hernias • Paralysis of diaphragm • Tumors of the diaphragm Hiccups
VII	15	Gastro intestinal emergencies and nursing interventions Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical , surgical and nursing management of: • Esophageal varices, • Ulcer perforation, • Acute cholecystitis • Diverticulitis • Fulminant hepatic failure • Biliary obstruction • Bowel obstruction • Gastroenteritis • Intussusception • Acute intestinal obstruction, perforation • Acute pancreatitis • Cirrhosis of liver complications • Liver , spleen, stomach pancreatic, mesenteric, bowel and greater vessel injuries • Acute appendicitis /peritonitis • Acute abdomen • Food poisoning
VIII	15	Congenital Anomalies of Esophagus • Esophageal atresia • Tracheo esophageal fistula

Unit	Hours	Content
		• Esophageal stenosis • Esophageal duplications • Dysphagia – Lusoria – aberrant right subclavian artery compressing esophagus • Esophageal rings – schalzkiring • Esophageal webs Congenital Anomalies of Stomach • Gastric atresia • Micro gastria • Gastric diverticulum • Gastric duplication • Gastric teratoma • Gastric volvulus • Infantile hypertrophic pyloric stenosis • Adult hypertrophic pyloric stenosis Congenital Anomalies of Duodenal • Duodenal Atresia or stenosis • Annular pancreas • Duodenal duplication cysts • Malrotation and mid gut volvulus Developmental anomalies of the intestine: • Abdominal wall defects (omphalocele and Gastroschisis) • Meckel's diverticulum • Intestinal atresia Hirschsprung's disease
IX	15	Pharmo Kinetics Drugs used in GIT Principles of administration Roles responsibilities of nurses Drugs in Peptic ulcer disease Proton Pump inhibitors H₂ Receptor Antagonists Cytoprotective Agents: Drugs used in Diarrhea Drugs used in constipation Drugs used in Inflammatory Bowel Disease Aminosalicylates Corticosteroids Immunomodulators chemotherapy Antibiotics Antiemetics: Anticholinergics Antihistaminics Anthelminthics Vitamin Supplements

Unit	Hours	Content
X	10	Nutrition and nutritional problems related to GI system Nutritional assessment and nursing interventions Therapeutic diets Adverse reactions between drugs and various foods Malnutrition- etiology , clinical manifestations and management Tube feeding, parenteral nutrition, total parenteral nutrition Obesity- etiology, clinical manifestations and management Eating disorders- anorexia nervosa, bulimia nervosa Recent advances in nutrition
XI	15	Malignant disorders of gastro intestinal system Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical , surgical, other modalities and nursing management of: • Malignancy of oral cavity ,Lip, Tongue, buccal mucosa, oropharynx, Salivary gland • Esophageal , Gastric , Carcinoma of bowel - Small bowel, Colorectal and Anal carcinoma, • Liver, biliary tract and Pancreatic carcinoma
XII	5	Administration and management of GE unit Design & layout Staffing, Equipment, supplies, Infection control; Standard safety measures Quality Assurance:-Nursing audit –records /reports, Norms, policies and protocols Practice standards
XIII	5	Education and training in GE care Staff orientation, training and development, In-service education program, • Clinical teaching programs

Practicals:

S.No.	Deptt./Unit	No. of Week	Total Hours
1	Diagnostic labs	2	60 Hours
2	Emergency and casualty	3	90 Hours
3	Liver transplant unit	1	30 Hours
4	GE Medical Ward	6	180 Hours
5	GE Surgical Ward	8	240 Hours
6	OT	2	60 Hours
7	ICU	4	120 Hours
8	Pediatric gastroenterology	2	60 Hours
9	Oncology	2	60 Hours
10	GE OPD	2	60 Hours
	Total	32 Weeks	960 Hours

Procedures Assisted

1. Endoscopy room – Upper G.I. Endoscopy (Diagnostic and therapeutic).
2. Sigmoidoscopy
3. Colonoscopy
4. Polypectomy
5. Endoscopic retrograde cholangio pancreatography (ERCP)
6. Liver biopsy
7. Percutaneous catheter drainage (PCD) of Pseudocyst pancreas
8. Abdominal paracentesis
9. Percutaneous aspiration of liver abscess
10. GE Lab : PT, HbsAg, Markers – A, B, C virus, CBP, ESR, Stool Test

Procedures Performed

1. History and Physical assessment
2. RT intubation / extubation / aspiration/suction
3. Gastric lavage and gavage
4. Bowel wash
5. Therapeutic Diets
6. Ostomy feeding
7. Stoma care
8. Monitoring vital parameters
9. Plan of inservice education programme for nursing staff and Class-IV employees
10. Counseling