

CLINICAL SPECIALITY – II

MEDICAL SURGICAL NURSING - CRITICAL CARE NURSING

Placement : Theory :- III Semester
Practical :-IV Semester

Hours of instruction
Theory: 150 hours
Practical: 950 hours
Total : 1100 hours

Course Description

This course is designed to assist students in developing expertise and in-to develop advanced skills for nursing intervention in caring for critically ill patients. It will enable the student to function as critical care nurses 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 patient.
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 ili patients including Advance Cardiac Life Support
6. Demonstrate skill in handling various equipments/gadgets used 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.

Unit	Hours	Content	Distribution of HRS
I	5	Introduction to Critical Care Nursing Historical review- Progressive patient care(PPC)	1
		Review of anatomy and physiology of vital organs, fluid and electrolyte balance	1
		Concepts of critical care nursing Principles of critical care nursing, Scope of critical care nursing	1
		Critical care unit set up including equipments supplies, use and care of various type of monitors & ventilators Flow sheets	2
II	10	Concept of Holistic care applied to critical care nursing practice	1
		Impact of critical care environment on patients:-	1
		• Risk factors, Assessment of patients, Critical care psychosis, prevention & nursing care for patients affected with psycho physiological & psychosocial problems of critical care unit,	3
		Caring for the patient's family, family teaching The dynamics of healing in critical care unit:-therapeutic touch, Relaxation, Music therapy, Guided Imagery, acupressure	3
		Stress and burnout syndrome among health team members	2
III	14	Review Pharmacokinetics	1
		Analgesics/Anti inflammatory agents	1
		Antibiotics, antiseptics	1
		Drug reaction & toxicity	1
		Drugs used in critical care unit (inclusive of ionotropic, life saving drugs)	2
		Drugs used in various body systems	4
		IV fluids and electrolytes	1
		Blood and blood components	2
		Principles of drug administration role of nurses and care of drugs	1
IV	5	Pain Management Pain & Sedation in Critically ill patients	1
		Theories of pain, Types of pain, Pain assessment,	1
		Systemic responses to pain	1
		pain management-pharmacological and non-pharmacological measures Placebo effect	2

V	5	Infection control in intensive care unit	1
		Nosocomial infection in intensive care unit; methyl resistant staphylococcus aureus (MRSA),	2
		Disinfection, Sterilization, Standard safety measures, Prophylaxis for staff	2
VI	10	Gastrointestinal System Causes, Pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing management of: -Acute Gastrointestinal Bleeding, Abdominal injury,	3
		Hepatic Disorders:-Fulminant hepatic failure,	2
		Hepatic encephalopathy,	1
		Acute Pancreatitis,	1
		Acute intestinal obstruction,	2
		perforative peritonitis	1
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,	2
		Acute tubular necrosis, Bladder trauma	2
		Management Modalities: Hemodialysis, Peritoneal	2
		Dialysis, Continuous Ambulatory Peritoneal Dialysis, Continuous arterio-venous hemodialysis,	2
		Renal Transplant	2
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,	2
		Guillein Barre-Syndrome, Myasthenia Gravis,	2
		Coma, Persistent vegetative state, Encephalopathy,	1
		Head injury, Spinal Cord injury	1
		Management Modalities: Assessment of Intracranial pressure, Management of intracranial hypertension, Craniotomy	2
		Problems associated with neurological disorders: Thermo regulation, Unconsciousness, Herniation syndrome	2

IX	5	Endocrine System Causes, Pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: Medical, Surgical and Nursing Management of :- Hypoglycemia, Diabetic Ketoacidosis,	30min
		Thyroid crisis, Myxoedema, Adrenal crisis, Syndrome of	30min
		Inappropriate/ hypersecretion of Antidiuretic Hormone (SIADH)	30min
		Management of other Emergency Conditions	30min
		Mechanism of injury, Thoracic injuries, Abdominal injuries, pelvic fractures, complications of trauma, Head injuries	30min
		Shock: Shock syndrome, Hypovolemic, Cardiogenic, Anaphylactic, Neurogenic and Septic shock	1
		Systemic inflammatory Response: The inflammatory response, Multiple organ dysfunction syndrome	30min
		Disseminated Intravascular Coagulation	30min
		Drug Overdose and Poisoning,	30min
		Acquired Immunodeficiency Syndrome (AIDS)	1
X	15	Ophthalmic: Eye injuries,	2
		Glaucoma,	1
		retinal detachment	1
		Ear Nose Throat: Foreign bodies,	1
		stridor,	1
		bleeding,	1
		quinsy,	1
		acute allergic conditions	1
		Psychiatric emergencies	2
		suicide,	2
crisis intervention	2		
XI	20	Cardiovascular emergencies Principles of Nursing in caring for patient's with Cardiovascular disorders	1
		Assessment: Cardiovascular system: Heart sounds,	1
		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	1

		management of:- Hypertensive crisis, Coronary artery disease, Acute Myocardial infarction,	2
		Cardiomyopathy, Deep vein thrombosis, Valvular diseases, Heart block, Cardiac arrhythmias & conduction disturbances,	2
		Aneurysms, Endocarditis, Heart failure	2
		Cardio pulmonary resuscitation BCLS/ ACLS	1
		Management Modalities: Thrombolytic therapy, Pacemaker – temporary & permanent,	2
		Percutaneous transluminal coronary angioplasty,	2
		Cardioversion, Intra Aortic Balloon pump monitoring, Defibrillations,	2
		Cardiac surgeries, Coronary Artery Bypass Grafts (CABG/MICAS), Valvular surgeries,	2
		Heart Transplantation, Autologous blood transfusion, Radiofrequency Catheter Ablation	2
XII	15	Respiratory System Acid-base balance & imbalance Assesment : History & Physical Examination	1
		Diagnostic Tests:Pulse Oximetry, End –Tidal Carbon Dioxide	1
		Monitoring, Arterial blood gas studies, chest radiography, pulmonary Angiography, Bronchoscopy, Pulmonary function Test, Ventilation perfusion scan, Lung ventilation scan	2
		Causes Pathophysiology, Clinical types, Clinical features, Prognosis, Management: Medical,SurgicalandNursing management of Common pulmonary disorders:-	2
		Pneumonia, Status asthmaticus, interstitial drug disease,	
		Pleural effusion, Chronic obstructive pulmonary disease,	2
		Pulmonary tuberculosis,	2
		Pulmonary edema, Atelectasis, Pulmonary embolism, Acute respiratory failure, Acute respiratory distress syndrome (ARDS),	1
		Chest Trauma Haemothorax, Pneumothorax	1
		Management Modalities:-Airway Management Ventilatory Management:-Invasive, non- invasive, long term mechanical ventilations	1

		Bronchial Hygiene:-Nebulization, deep breathing exercise,	1
		chest physiotherapy, postural drainage, Inter Costal Drainage, Thoracic surgeries	1
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	1
		Pain management	1
		Wound care	1
		Infection control	1
		Prevention and management of burn complications	1
		Grafts and flaps Reconstructive surgery	1
		Rehabilitation	1
XIV	5	Obstetrical Emergencies Causes, Pathophysiology, Clinical types, clinical features, diagnostic Prognosis, Management: Medical, Surgical and Nursing management of :Antepartum haemorrhage, Post partum haemorrhage,	2
		Preeclampsia, eclampsia,	1
		Obstructed labour and ruptured uterus, Puerperal sepsis, Obstetrical shock	2
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,	2
		Neonatal seizures, Metabolic disorders, Intra cranial Hemorrhage,	2
		Neonatal Sepsis, RDS/HMD (Respiratory Distress Syndrome/Hyaline Membrane Disease),	2
		Congenital disorders:- • Cyanotic heart disease, tracheo oesophageal fistula, congenital hypertrophic pyloric stenosis, imperforate anus	2

		<ul style="list-style-type: none"> • Pediatric emergencies Dehydration, Acute broncho pneumonia, Acute respiratory distress syndrome, Poisoning, Foreign bodies, seizures, traumas, Status asthmaticus 	2
XVI	2	Legal and ethical issues in critical care-Nurse's role Brain death Organ donation & Counselling	1
		Do Not Resuscitate(DNR) Euthanasia Living will	1
XVII	2	Quality assurance Standards, Protocols, Policies, Procedures Infection control; Standard safety measures	1
		Nursing audit Staffing Design of ICU/CCU	1

Practical

Total = 960 Hours
1 Week = 30 Hours

SR.NO.	Dept.Unit	No.of Weeks	Total Hours
1	Burns ICU	2	60 Hours
2	Medical ICU	8	240 Hours
3	Surgical ICU	12	360 Hours
4	CCU	2	60 Hours
5	Emergency Department	3	90 Hours
6	Dialysis Unit	1	30 Hours
7	Transplant Room	2	60 Hours

8	Paediatric/ NICU	2	60 Hours
	Total	32 Weeks	960 Hours

Bibliography

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2. Sheree Comer Delumer's "Critical care NSG care plan" 2nd edition, 2005 Thomson.
- R.J. Vakil " Gastrontorolgy Dennis Kason".
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- Jaya Kurvella "Essentials of oritical NSGJaypee Brothers Number 2007
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3. Dennis, L.K " Harrison's Principles of Internal Medicine. Vol.-2,16th edition, McGraw- Hill Medical Publishing.
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7. Potter, P " Basic Nursing : Essentials fro Practice" 6th edition With CD-ROM, Mosby.
8. Joshi, Y.K." Basic of Clinical Nutrition" 1st edition, Jaypee Brothers Med. Publiers.
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11. Behram, R "Nelson Textbook of Pediatric" 17th edition, Saunders.
12. Rang, H.P" Pharamcology" 5th edtion, Churchil Livingstone.
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Edition ,With CD-ROM, Lippincott Williams.

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15. M.S. Baird, Manual of Critical care Nursing 5th ed, Elsevier,2005.
16. P.G.Morton :Critical Care Nursing 8th ed. Lippincott Villiams and wilkins, 2005
17. Sheree Comer: Delmar’s Critical care Nursing care plans:2nd Ed.

Journals :- 1.Critical care nursing : AACN

2.Critical Care Nursing Clinic

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. CPAP (Continuous Positive Airway pressure)
- c. Care of tracheostomy
- d. 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:

Evaluation Criteria:

Theory:

Unit test I	25 marks
Prefinal	100 marks

Seminar (2)	100 marks each
Written assignment	25 marks
Project	100 marks
Total marks	450 marks (send university out of 100)

Practical:

Unit test I	25 marks
Prefinal	100 marks
Nursing procedure	50 marks

Clinical assignments

- Case study (2) 50 marks each
- Case presentation (2) 50 marks each
- Care plan (3) 50 marks each
- Clinical evaluation (2) 100 marks each

Total marks	725 marks (send university out of 100)
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University Examination:

Theory: 100

Practical: 100

Dr D Y Patil College of Nursing
M Sc Nursing
Evaluation criteria for Case study

Name of the student:

Topic:

Date of submission:

Sr No	Criteria	Marks allotted	Marks obtained
1	Assessment	05	
2	Theoretical knowledge about disease	05	
3	Comparative study of patient's disease & book picture	10	
4	Management: Medical/surgical	05	
5	Nursing process	15	
6	Drug study	03	
7	Summary & conclusion including research evidence	05	
8	Bibliography	02	
Total		50	

Remark

Signature of student
Date

Signature of evaluator
Date

Dr D Y Patil College of Nursing
M Sc Nursing
Evaluation criteria for Care Plan

Name of the student:

Topic:

Date of submission:

Field of placement:

Sr No	Criteria	Marks allotted	Marks obtained
1	Assessment	12	
2	Nursing diagnosis	3	
3	Goal	2	
4	Outcome criteria/Objective	2	
5	Nursing intervention	15	
6	rationale	03	
7	Evaluation	03	
8	Nurses notes	10	
Total		50	

Remark

Signature of student
Date

Signature of evaluator
Date

Dr D Y Patil College of Nursing
M Sc Nursing
Evaluation criteria for Case presentation

Name of the student:
Name of the patient:
Diagnosis:
Ward:
Date of presentation:

Sr No	Criteria	Marks allotted	Marks obtained
1	Subjective & objective data	08	
2	Problem & need identified & nursing care plan	15	
3	Effectiveness of presentation	05	
4	Corelation with patient & book, research evidence	10	
5	Use of A. V. aids	05	
6	Physical arrangement	02	
7	Group participation	03	
8	Bibliography	02	

Total	50	
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Remark

Signature of student
Date

Signature of evaluator
Date

DR.D.Y.PATI COLLEGE OF NURSING PIMPRI , PUNE-18.

EVALUATION CRITERIA FOR SEMINAR PRESENTATION

Subject: _____

Date: _____

Name of student: _____ Time: _____

Group: _____ Maximum Marks: 100

S.No.	Criteria	Rating					Remarks
		1	2	3	4	5	
1.	Content Introduction						
2.	Organization of Content						
3.	Presentation of topic						
4.	Relevant examples						

5.	Relevant statistical data						
6.	Group participation						
7.	Control of group						
8.	AV Aids: Appropriate to subject						
9.	Proper use of A/V Aids						
10.	Self explanatory						
11.	Attractive						
12.	Planning and preparation						
13.	Use of Modern technology						
14.	Physical facilities: Environment						
15.	Classroom preparation						
16.	Over lay out						
17.	Personal Appearance: Voice & clarity						
18.	Mannerisms						
19.	Conclusion						
20.	References						

Remarks & signature of supervisor:

Signature of student:

DR. D. Y. Patil College of Nursing, Pimpri, Pune-18

M. Sc. Nursing

Evaluation Criteria for Written Assignment

Total Marks = 25

S.N.	Criteria	Marks
1.	Content	10
2.	Organization	05
3.	Resources used	03
4.	Completeness	03
5.	Neatness	02
6.	Bibliography	02
Total		25

Remarks: -

Total:-

Date & Signature of the Evaluator:

Date & Signature of the student

CLINICAL EVALUATION: - COMPREHENSIVE NURSING CARE

(maximum marks – 100 each area)

Name of the students

Year :- II semester M.Sc Nursing

Duration of Experience :

SR.No.	Criteria	1	2	3	4	5
I	Understanding of patient as person A.Approach 1.Rapport with patient / family members. 2.Collects significant information B.Understanding of patient's health problems. 1.knowledge about disease condition. 2.knowledge about investigations. 3.knowledge about treatment.					

	4.knowledge about progress of the patient.					
II	<p>Nursing care plan</p> <p>A.Assessment of the condition of the patient .</p> <ol style="list-style-type: none"> 1. History taking –past & present health and illness 2.specific observation of the patient 3.Nursing diagnosis <p>B.Development of the short – term & long term nursing care plans.</p> <ol style="list-style-type: none"> 1.Indentification of all problems in the patient family. 2.Priritization 7 implementation of the plans. 3.Evaluation of the care given & re-planning 					
III	<p>Technical skill</p> <ol style="list-style-type: none"> 1.Economical & safe adaptation to the situation & available facilities. 2.Implements the procedure with skill speed & completeness. 					
IV	<p>Recording & Reporting</p> <ol style="list-style-type: none"> 1.Prompt, Precise , accurate & relevant. 2.Maintanance of clinical experience file. 					
V	<p>Health Teaching</p> <ol style="list-style-type: none"> 1.Incidental/ Planned teaching with principles of teaching & learning. 2.Uses visual aids appropriately 					
VI	<p>Personality</p>					

	1. Professional appearance (Uniform, dignity, tact fullness interpersonal relationship , Punctuality etc. 2. Sincerely, honesty & sense of responsibility					
	Total Marks					

Comments

Signature of student

signature of clinical supervisor