CURRICULUM

OF

POST BASIC DIPLOMA IN
CARDIO THORACIC NURSING

Prepared in March 2015

PHILOSOPHY OF THE PROGRAM

The College of nursing is a constituent unit of MGM Institute of Health Sciences (MGMIHS) Navi Mumbai. The philosophy of college of nursing is consistent with the philosophy of MGMIHS and Indian Nursing Council.

We believe that ……

- Registered nurses need to be trained in Cardio-Thoracic Nursing in clinical settings in order to provide competent care to critically ill patients.

- registered nurses need to be prepared as per the expanding roles of nurses and advances in technology for effective participation in cardio-thoracic care.

PURPOSE:

The purpose of course is to train nurses to:

1. Provides quality care to patients with cardio thoracic disorders.
2. Manage and supervise care of patients with cardio thoracic disorders.
3. Teach nurses, allied health professionals and family members in areas related to cardio thoracic nursing.
4. Conducts research in areas of cardio thoracic nursing.

COURSE DESCRIPTION

The course is designed to prepare registered nurses (GNM or B.Sc.) with specialized knowledge, skills and attitude in providing advance quality care to patients with cardio thoracic problems and their families.

GENERAL OBJECTIVE

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

SPECIFIC OBJECTIVES:

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

1. Describe the concepts and principles of cardio thoracic nursing.
2. Perform advance cardiac life support skills
3. Apply nursing process in caring of patients with cardiothoracic diseases.
4. Communicate effectively with patients having cardio thoracic problems and their family members.
5. Demonstrate skills in management of cardio-thoracic services / units.
6. Participate effectively as a member of the cardiac care team.
7. Make a plan for organization of cardiac and thoracic units.
8. Conduct research in cardio-thoracic nursing.
9. Teach and supervise nurses and allied health workers.

ADMISSION TERMS AND CONDITIONS

The student seeking admission to this course should:

1. Be a registered nurse (R.N. &R.M.) or equivalent.
2. Possess a minimum of one year experience as a staff nurse.
3. Nurses from other countries must obtain an equivalence certificate from INC before admission.
4. Be physically fit.
5. No. of seats
    - Maximum number of seats =25
    - Student patient ratio =1:3 , (For calculation of student intake)

DURATION

Course Duration	=	1 Years
Teaching: Theory & clinical Practice	=	42 weeks
Internship	=	4 week
Examination (including preparatory leave)	=	2 weeks
Vacation	=	2 weeks
Public Holidays	=	2 weeks
		52 weeks

COURSE OF INSTRUCTIONS

Sl. No.	Subject	Theory (in hrs)	Practical (in hrs)
1.	Clinical Nursing – I (Inclusive of Foundation Courses)	155	1280 (Integrated clinical practice)
2.	Clinical Nursing - II	155	
3.	Supervision and Management, Clinical Teaching, Elementary Research and Statistics	-	
	i.) Supervision and Management	30	
	ii.) Clinical Teaching	30	
	iii.) Elementary Research and Statistics	30	
4.	Internship		160
	Total hours	**400**	**1440**
	Total hours = 1840 hrs		

HOURS DISTRIBUTION FOR THEORY AND PRACTICE

- Available hours = 42 weeks x 40 hours/ week = 1680 hours
- Block Classes = 4 weeks x 40 hours/ week = 160 hours
- Integrated theory & clinical practice = 38 weeks x 40 hours/ week = 1520 hours

  Theory hours = 38 weeks x 6 hours/ week = 240 hours

  Clinical Experience = 38 weeks x 34 hours/ week = 1292 hours
- Internship = 4 weeks x 40 hours/ week = 160 hours

SCHEME OF EXAMINATION

Subject	**Duration Hours**	**Internal assessment marks**	**External examination marks**	**Total marks**
A. Theory				
Paper I- Clinical Nursing I	3	25	75	100
Paper II- Clinical Nursing II	3	25	75	100
Paper III - Supervision and Management, Clinical Teaching, Elementary Research and Statistics	3	25	75	100
B. **Practical**				
Clinical Nursing (teaching & supervision to be Integrated)		100	100	200
Grand Total		**175**	**325**	**500**

GENERAL RULES FOR UNIVERSITY YEARLY EXAMINATION

A. Condition for admission to Examination

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

B. Examination Body

3. The examination will be conducted by the **University recognized** by the Indian Nursing Council.

C. Standard of Passing

4. In order to pass a candidate should obtain at least 50% marks separately in internal and external examination in each of the theory and practical papers.
5. Grades are as follows
    a) Second division = Less than 60%
    b) First division = 60 % and above and below 75%
    c) Distinction = 75 % and above
6. Students will be given opportunity of maximum of 3 attempts for passing.

CERTIFICATION

1. Title – Post Basic Diploma in **Cardio – thoracic nursing**
2. A diploma is awarded upon successful completion of the prescribed study programme, which will state that,
    i.) Candidate has completed the prescribed course of cardio- thoracic nursing.
    ii.) Candidate has completed prescribed clinical experience.
    iii.) Candidate has passed the prescribed examination.

CLINICAL NURSING –I
(Including Foundation Courses)

Theory: 155 hours

Course Description –This course is designed to develop an understanding of the principles of related biological and behavioural sciences and cardio-thoracic nursing.

Objectives:

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

1. Describe the concept and principles of behavioural, biological and nursing sciences as applied to cardio thoracic nursing.
2. Describe various drugs used in cardio thoracic disorders and nurses' responsibility.
3. Apply nursing process in providing comprehensive care to patients with cardio-thoracic disorders and emergencies.
4. Practice infection control measures.
5. Describe the nurse's role in various diagnostic measures.
6. Identify the psychosocial problems of patients and family members and provide holistic care.
7. Plan the dietary regimen of patients with cardio thoracic disorders.
8. Identify various coping strategies in order to assist in relieving emotional and spiritual distress among patient and family members.

Unit	Hrs	Theory	Hrs	Practical
I	09	**PSYCHOLOGY** Review • Individual differences • Learning, motivation, attention and perception • Emotions • Human behaviour and needs in crisis. • Stress and coping in crisis situation • Leadership • Communication and IPR • Counselling • Attitudes and humanizing care	1	Role play on Counselling of patient or relatives.
II	6	**MICROBIOLOGY** **Review** • Immunity • Infection • Principles of asepsis • Sterilization and disinfection • Diagnostic tests in Microbiology & related nurses' responsibility. • Standard safety measures • Biomedical waste management	4	Visit to CSSD

Unit	Hrs	Theory	Hrs	Practical
III	**15**	**APPLIED ANATOMY AND PHYSIOLOGY** Review - Respiratory system (Lung, thoracic cavity, embryology) - Cardiovascular system (Heart, blood vessels, embryology) - Neurological system - Endocrine system		
IV	**13**	**PHARMACOLOGY** Review - Pharmacokinetics - Drug reactions and toxicity - Principles of drug administration , role of nurses • Analgesics / Anti inflammatory agents. • Antibiotics, antiseptics • Blood and blood components • Thrombolytic • Inotropic • Beta blocking agents • Calcium Channel Blockers • Vasodilators • Vasoconstrictor • ACE inhibitors • Antiaarythmics • Anticoagulants • Antiplatelets • Diuretics • Sedatives / Tranquilizers , • Muscle relaxants • Digitalis • Antilipidemics • Haemostatic / antihemmorhagic • Bronchodilators • Antihistaminic, anti-allergy • Potassium chloride, calcium gluconate, sodabicab etc. • Crystalloid and colloids	2	Drug calculation Operating ▪ syringe pump ▪ infusion pump ▪ metered dose inhaler
V	**10**	**GENETICS** - Meaning of genetics and heredity - Menedelian laws of inheritance - Genetic Disorders • Chromosomal errors • Inborn errors of metabolism • Congenital anomalies - Genetic counselling - Nurses' role in genetic counselling.		

Unit	Hrs	Theory	Hrs	Practical
VI	10	**INTRODUCTION TO CARDIO- THORACIC NURSING** • Historical developmental and advancement in the cardio thoracic field. • Cardio-thoracic diseases- major health problems. • Cardio thoracic surgery • New technology, developments and nursing practice. • Levels of cardiac care and role of nurse.		Presentations
VII	10	**INTRODUCTION TO NURSING PROCESS** • Assessment • Nursing diagnosis • Nursing care plan • Implementation • Evaluation Cardio-thoracic nursing assessment • History taking • Health Assessment – physical examination, chest examination	5	Practice chest examination. Normal and abnormal Heart sound auscultation
VIII	15	**DIAGNOSTIC MEASURES** • Non – Invasive ▪ ECG- abnormal ECG interpretation ▪ Echocardiography – 2D, 3D ▪ Color Doppler ▪ Tranesophageal echocardiography ▪ Pulmonary function test ▪ Cardiac monitoring techniques, chest lead and modified lead placement ▪ Telemetry ▪ Nuclear diagnostic procedures ▪ Magnetic resonance imaging ▪ Chest x ray • Invasive ▪ Brochoscopy and graphics ▪ CVP and JVP ▪ Blood gases and its significance ▪ Cardiac catheterization and angiographies ▪ Arterial monitoring, swan Ganz monitoring ▪ Diagnostic radiographies of chest and CVS. • Latest diagnostic measures • Nurses' role in diagnostic tests.	15	Procedure to be observed 1. Echo 2. USG 3. Monitoring JVP, CVP 4. CT scan /MRI 5. PET Scan 6. Angiography 7. Cardiac Catheterization 8. Angioplasty Procedure to be Assisted 1. Monitoring JVP, 2. ALS 3. ABG analysis 4. ECG recording 5. Arterial Catheterization 6. Swan Ganz catheterization 7. Bronchoscopy
IX	20	**Cardio thoracic emergency interventions** • CPR-BLS and ACLS • Use of ventilators • Use of Defibrillator • Pace maker • Post resuscitation care.		BLS ACLS Mechanical ventilator Defibrillator Pacemaker

nit	Hrs	Theory	Hrs	Practical
X	5	**Diet in Cardio Thoracic conditions** • Dietary Principles • Diet in hypertension • Diet in Myocardial Infarction / angina/ CAD • Diet in Congestive cardiac failure		Plan balanced diet for patients with cardiac disorders
XI	10	**Communication skills and IPR** • Process and methods • Establishing and maintaining good IPR and Communication with family, staff and colleague • Breaking bad news • Multidisciplinary team and role of nurses • Guidance and Counseling		
XII	5	**Care of dying patients** • Spiritual support to the dying • Grief and grieving process • Bereavement support • Organ donation and counselling • Care of dead.		

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4. Marzlin K. Cardiovascular Nursing: A Comprehensive Overview.
5. Fuster V., Walsh R., Harrington R Hurst's The Heart

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SCHEME OF EXAMINATION

Sr. No	Theory Exam	Marks allotted	Duration in hours
1	Internal Assessment	25	-
2	External Assessment	75	3
	Total	**100**	

INTERNAL ASSESSMENT **(25 MARKS)**

Sr No	Item	Marks allotted	Weightage (%)	Marks out of 25
1.	First term Exam	50	20	5.0
2.	Pre-final Exam	75	30	7.5
3.	Assignments			
	a) Seminar	25	10	2.5
	b) Journal- Diagnostic tests, interventions, instruments, machines.	25	20	5.0
	c) Drug book	25	10	2.5
4.	Attendance		10	2.5
	Total	**200**	**100**	**25**

CLINICAL NURSING –II

Theory: 155 hours

Course Description –This course is designed to develop an understanding of cardio-thoracic disorders, emergencies and their management.

Objectives:

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

1. Describe the etiology, pathophysiology, signs and symptoms, investigations, nursing management of adult and children with cardio thoracic disorders.
2. Describe the nurse's role in various diagnostic and therapeutic procedures.
3. Discuss the pre and post operative nursing care of adult and children with cardio thoracic surgery.

Unit	Hrs	Theory	Hrs	Practical
I	20	**Cardio thoracic disorders** Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology and nursing management of; • Coronary artery disease • Angina of various types • Cardiomegaly • Myocardial infarction • Congestive cardiac failure • Heart failure, pulmonary edema, shock • Hypertension • Rheumatic valve disease • Inflammatory heart diseases: Infective Endocarditis, Myocarditis, Pericarditis • Cardiomyopathy : dilated, restrictive, hypertrophic		
II	20	**Altered pulmonary conditions** Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology and nursing management of; • Bronchitis, Bronchial asthma • Bronchiectasis • Pneumonias • Lung abscess, Lung tumour • Pulmonary tuberculosis • Fibrosis, Pneumoconiosis etc. • Pleuritis, effusion. • Pneumo, haemo and pyothorax • Interstitial lung disease • Acute and chronic obstructive pulmonary disease • Acute respiratory failure • Adult respiratory distress syndrome • Pulmonary embolism • Pulmonary hypertension		

Unit	Hrs	Theory	Hrs	Practical
III	3	**Nursing care of patients with temporary and permanent pacemaker** • Types of temporary pacemaker • Types of permanent pacemaker • Indications for each types • Principles of pacing procedure • Patient teaching before, during and after pacing	2	Care of patient with Pacemaker
IV	4	**Nursing care of patients after coronary revascularization** • Percutaneous transluminal coronary angioplasty, stunt, balloon, types. • Indication, contraindication for procedure • Procedure • Care of patient before, during and after procedures • Complications • Laser therapy for revascularization	1	Preparation of patient for PTCA. Care of patient after PTCA.
V	5	**Nursing care of Patients with Arterio-vascular diseases** • Aortic aneurysms**.**		
VI	14	**Interpretation, Management of Dysrhythmia and nurses' role.** • Sinus arrhythmias • Atrial arrhythmias • Junctional or nodal arrhythmias • Ventricular arrhythmias • AV block • Pathophysiological responses • Recircuit arrhythmias and ablation therapy • Automatic implantable cardioverter defibrillator • Nurses' role and responsibilities.	1	Taking 12 lead ECG of patient. Operating ECG machines.
VII	3	**Nursing care of patients with chest drainage tubes** • Principles of Under- water seal drainage • Equipment, set up, assessment, care of patient, complications • Principles of autotransfusion, indications, complications, care, set up.	1	Care of patient with Under water seal drainage system with and without suction, autotransfusion
VIII	15	**Congenital heart diseases** Embryological development of heart. Etiology, clinical manifestations, diagnosis, prognosis, related Pathophysiology and nursing management of; • Classification – cyanotic and acynotic heart disease • Tetralogy of fallots • Atrial septal defect • Ventricular septal defect • Eisenmenger's complex		

Unit	Hrs	Theory	Hrs	Practical
		□ Patent ductus arteriosus. AP window □ Truncus arteriosus □ Transportation 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.		
IX	8	**Nursing care of pediatric patient with cardio thoracic disorders** □ Review of growth and development □ Psychological aspects of pediatric care, and family □ Pre, peri and post operative cardio thoracic care □ Pediatric pain assessment and management.	2	Assessment of growth and development. Pain assessment
X	30	**Nursing care of Patient undergoing cardio thoracic surgery** □ Indication, selection of patient □ Preoperative assessment and preparation, patient teaching. □ Intraoperative care: Principles of open heart surgery, equipment, anaesthesia, cardiopulmonary bypass □ Surgical procedures for ▪ coronary artery bypass grafting ▪ recent advances and types of graft, ▪ valve replacement or reconstruction ▪ cardiac transplant ▪ palliative surgery and types of stunts ▪ vascular surgery ▪ other recent advances □ Thoracic surgery ▪ Lobectomy ▪ Pneumonectomy ▪ Tumour excision etc. □ Immediate post operative 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	10	Preoperative preparation of patient undergoing cardiac surgery. Assisting for Open heart surgery. Care and operation of equipments required for surgery. ▪ Anaesthesia trolley ▪ CPB machine ▪ Octopus used in off pump CABG. ▪ Cardioplegia ▪ Internal defibrillation. ▪ Ventricular assist device. ▪ Mechanical Valves ▪ Biological valves

Unit	Hrs	Theory	Hrs	Practical
		▪ Neurological problems ▪ Renal problems ▪ Psychological problems □ Chest Physiotherapy □ Pain assessment and nursing intervention**,** complimentary therapy / alternative system of medicine. □ Intermediate and late post operative care after ▪ CABG ▪ Valve surgery, others □ Rehabilitation after Cardiac surgery		Chest Physiotherapy and cardiac rehabilitation – Posting in Physiotherapy Department
XI	6	**Nursing care of patient with Obstructive airway** □ Assessment □ Use of artificial airway □ Endotracheal intubation □ Tracheostomy □ Complications □ Minimum cuff leak □ Securing tubes etc. □ Oxygen delivery systems ▪ Nasal cannula ▪ Oxygen mask, venture 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, indicators, physiology, and complications ▪ Weaning off the ventilator ▪ Nursing assessment and interventions of ventilated patient. ▪ Ventilator adjustments related to correcting ABG abnormality ▪ Care of a chronic ventilated patients ▪ Complications of mechanical ventilator	4	Care and operation of equipments required for surgery. ▪ Airways ▪ ET tube ▪ Tracheostomy ▪ Oxygen delivering systems. ▪ Bi-PAP mask ▪ Mechanical Ventilator ▪ ABG machine Assist for ▪ ET intubation ▪ Tracheostomy ▪ Weaning

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14. Johnson K., Anderson K., Oxford Handbook of Cardiac Nursing.
15. Finkelmeier B. Cardiothoracic Surgical Nursing.
16. Marzlin K. Cardiovascular Nursing: A Comprehensive Overview.
17. Fuster V., Walsh R., Harrington R Hurst's The Heart

SCHEME OF EXAMINATION

Sr. No	Theory Exam	Marks allotted	Duration in hours
1	Internal Assessment	25	-
2	External Assessment	75	3
	Total	**100**	

INTERNAL ASSESSMENT **(25 MARKS)**

Sr. No	Item	Marks allotted	Weightage (%)	Marks out of 25
1.	First term Exam	50	20	5
2.	Pre-final Exam	75	30	7.5
3.	Assignments			
	a) Seminar	25	10	2.5
	b) Journal – Interventions, instruments, machines	25	20	5
	c) ECG Album	25	10	2.5
4.	Attendance		10	2.5
	Total	**200**	**100**	**25**

SUPERVISION AND MANAGEMENT, CLINICAL TEACHING, ELEMENTARY RESEARCH AND STATISTICS

Theory: 90 hours

Course Description –This course is designed to develop an understanding of principles of supervision and management, clinical teaching and research.

Objectives:

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

1. Describe professional trends.
2. Describe role of nurse in management and supervision of nursing personnel in Cardio-thoracic unit, ICCU and ICU.
3. Teach nurses and allied health workers about cardiac thoracic nursing.
4. Describe research process and perform basic statistical tests.
5. Plan and conduct research in cardiac thoracic nursing.

Section A: Supervision and Management 30 hrs

Unit	Hrs	Theory	Hrs	Practical
I	15	**Supervision and management** • Management ▪ Definition ▪ Principles ▪ Elements of management of ICCU, cardio thoracic unit – planning, organizing, staffing, reporting, recording and budgeting. ▪ ICU and coronary care unit management – time material and personnel. ▪ Layout and design of a cardio thoracic unit and ICU/ ICCU ▪ Cardiac patients transport service- mobile coronary care unit. • Clinical supervision ▪ Introduction, definition and objectives of supervision ▪ Principles and functions of supervision ▪ Qualities of supervisors ▪ Responsibilities of clinical supervisors ▪ Practical standards of Cardio thoracic units. - Policies and procedures - Establishing standing orders and protocols ▪ Orientation programme for new recruits. • Quality Assurance programme in cardio thoracic units ▪ Nursing Audit ▪ ISO, NABH , JCI accreditation	5	Visit to Mobile coronary unit Preparation of - SOPs - Performance appraisal tool

Unit	Hrs	Theory	Hrs	Practical
		Performance appraisal ▪ Principles of performance evaluation ▪ Tools of performance appraisal – rating scales, checklist, peer reviews, self appraisal Staff development ▪ Introduction and purposes ▪ In-service education ▪ Continuing education		
II	5	**Professional trends** Introduction Code of ethics, code of professional conduct and practice standards of Nursing in India. Ethical issues in coronary care unit Expanding role of the nurse: Specialist nurse, nurse practitioner etc. Professional organizations.		
III	5	**Medico – Legal aspects** Legislations and regulations related to cardio thoracic care Consumer Protection Act (CPA) Negligence and Malpractice Legal responsibilities of nurses ▪ Bill of Right of a patient ▪ Case studies of Judgement with regard to negligence of services in the hospital Records and Reports Role of the nurse in Legal issues Professional practice issues in the cardio thoracic unit Bioethical issues in Cardio thoracic care ▪ ethics, ethical principles, ▪ withholding and withdrawing treatment, ▪ Ethical decision making in a cardio thoracic unit. ▪ Code of professional conduct and practice standards.		

Section B: Clinical Teaching **30 hrs**

Unit	Hrs	Theory	Hrs	Practical

IV	20	**Teaching Learning Process**
		- Introduction and concepts
		- Principles of teaching and learning
		- Formulation of learning objective
		- Lesson planning
		- Teaching methods
		  ▪ Lecture
		  ▪ Demonstration, simulation
		  ▪ Discussion
		  ▪ Clinical teaching methods
		  ▪ Microteaching
		  ▪ Self learning
		- Evaluation- Assessment of students
		  ▪ Purposes
		  ▪ Types
		  ▪ Steps
		  ▪ Tools for assessing knowledge, skill and attitude
		- Use of media in teaching learning process
			10	Preparing lesson plans
				
				Conducting clinical teaching (3) using various teaching methods.

Section C: Elementary research and statistics **30 hrs**

Unit	Hrs	Theory	Hrs	Practical
V	18	**Research** - Research and research process - Types of Research - Research problem /question - Review of Literature - Research approaches and designs - Sampling - Data collection: tools and techniques - Analysis and interpretation of data - Communication and utilization of Research - Research priorities in cardio thoracic	2	Presentation of research proposal

	7	**Statistics**
		- Sources and presentation of data
		  ▪ Qualitative and quantitative
		  ▪ Tabulation, frequency distribution, percentiles
		  ▪ Graphical presentation
		- Measures of central tendency: Mean, Median, Mode
		- Measures of Variance
		- Normal probability and tests of significance
		- Co-efficient of correlation
		- Statistical packages and its application
		- Preparing a research proposal
		- Application of Computers.
			3	Computer application – practicals
				
				• MS word
				• MS Excel
				• MS PPT

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SCHEME OF EXAMINATION

Sr. No	Theory Exam	Marks allotted	Duration in hours
1	Internal Assessment	25	-
2	External Assessment	75	3
	Total	**100**	

INTERNAL ASSESSMENT **(25 MARKS)**

Sr. No	Item	Marks allotted	Weightage (%)	Marks out of 25
1.	First term Exam	50	20	5
2.	Pre-final Exam	75	30	7.5
3.	Assignments			
	a) Ward management report	25	10	2.5
	b) Clinical teaching (3)	150	10	2.5
	c) Research project	100	20	5
4.	Attendance		10	2.5
	Total	**400**	**100**	**25**

CLINICAL NURSING (TEACHING & SUPERVISION TO BE INTEGRATED)

HOURS DISTRIBUTION FOR CLINICAL EXPERIENCE

Sr. No.	Units / Departments	No. of weeks	No. of Hrs
1.	Cardio thoracic- Medical	6	204
2.	Cardio thoracic- Surgical	6	204
3.	OTs (Cardiac and thoracic)	6	204
4.	Casualty	2	68
5.	Diagnostic labs including cath lab	2	68
6.	ICCU	4	136
7.	ICU	4	136
8.	CCU	4	136
9.	Pediatric intestine Unit	2	68
10.	OPD	2	68
	Total	**38 weeks**	
	Internship*	**4 weeks**	**160**

*Two weeks evening and two weeks night (40 hrs per week)

SCHEME OF EXAMINATION (Practical)

Sr. No	Theory Exam	Marks allotted
1	Internal Assessment	100
2	External Assessment	100
	Total	**200**

INTERNAL ASSESSMENT **(100 MARKS)**

Sr. No	Item	Marks allotted	Weightage (%)	Marks out of 100
1.	First term Exam	50	10	10
2.	Pre-final Exam	100	30	30
3.	Assignments			
	a) Clinical Evaluation (Medical, Surgical, Critical Units, OT)	400	10	10
	b) Case studies (5)	250	10	10
	c) Case Presentations (5)	250	10	10
	d) Observation report	50	5	10
	e) Nursing Care Plan	50	5	5
	f) Health Teaching (3)	75	10	5
4.	Attendance		10	10
	Total	**1225**	**100**	**100**

ESSENTIAL CRITICAL CARE NURSING SKILLS

I. Procedures to be Observed

1. Echocardiogram
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

II. Procedures to be Assisted

1. Monitoring JVP
2. Advanced life support system
3. Arterial blood gas analysis
4. ECG recording
5. Arterial catheterization
6. Chest tube insertion
7. Endotracheal intubation
8. Tracheostomy
9. Ventilation
10. Central line, arterial line ,cardiac pacing
11. Swan- Ganz catheter
12. Intra-Aortic Balloon Pump
13. Left ventricular assist device. Right ventricular assist device
14. Centrifugal, pulsatile, implantable devices
15. Extra corporeal membrane oxygenation cannulation
16. Use of defibrillation, cardio pulmonary resuscitation
17. Bronchoscopy
18. Chest drainage
19. Pacemaker

III. Procedures to be Performed

1. Pulse oxymetry
2. Arterial BP Monitoring
3. Venous access, ABG collection, monitoring
4. Oxygen administration, suctioning, respiratory therapy, tracheostomy toilet
5. CPR
6. Airway management
    a) Application of oropharyngeal airway

b) Oxygen therapy
c) CPAP
d) Care of Tracheostomy
e) Endotracheal intubation

7. Defibrillation
8. Care of Intercostal drainage
9. Nebulisation, inhalations
10. Chest physiotherapy
11. Monitoring of patients with cardiac disorders- clinically and with monitors, CRT (Capillary refill time), ECG
12. Gastric lavage
13. Setting of ventilators
14. Hemodynamic monitoring of central venous pressure, arterial pressure, pulmonary artery pressure.
15. Admission and discharge of patients with cardiac thoracic disorders
16. OG (Orogastric) tube insertion
17. Thermoregulation- management of thermoregulation and control, use of hypothermia machines.
18. Administration of drugs: IM, IV injection, IV cannulation and fixation of infusion pump, calculation of dosages, monitoring fluid therapy.
19. Administration of blood and its components
20. Procedures for prevention of infection: hand washing, disinfections and sterilization, surveillance, fumigation.
21. Collection of specimens related to cardiac care.
22. Maintenance of intake and output chart.
23. Mechanical ventilation
24. PEEP therapy
25. Cardiac output- thermoregulation procedure

IV: other procedures