

# Master of Science - Medical Surgical Nursing

## Syllabus - First Semester

### NURSING EDUCATION PRACTICAL

**Course Code: MSN4102**

**Credit Unit: 8**

**Activities (Practical):**

- Framing philosophy, aims and objectives.
- Lesson Planning.
- Micro teaching-2.
- Conduct practice teachings using different teaching strategies -10 (like lecture cum discussion, demonstration- lab method, field trips, seminars, project, role play, panel discussion, clinical methods etc)
- Preparation and utilization of instructional Aids using different media.
- Develop course plans, unit plans, rotation plans.
- Conduct a continuing education workshop.
- Annotated bibliography.

- Critical evaluation of any nursing education program offered by a selected institution.
- Planning and Organizing field visits.
- Educational visits.
- Field visits (INC/SNRC) to get familiar with recognition/registration process.
- Construct, administer and evaluate tools (objective & essay type test, observation checklist, rating scale etc )
- Observe and practice application of various non-standardized tests (intelligence, Aptitude, personality, Sociometry, physical & mental disabilities tests.)

### **Scheme of Examination**

#### **Practical:**

	<b>Internal- 100</b>				<b>EE = 100</b>		
<b>Components</b>	<b>ATT</b>	<b>RM</b>	<b>W/ISE</b>	<b>PT</b>	<b>RM</b>	<b>PT</b>	<b>RP</b>
<b>Weightage (%)</b>	<b>5</b>	<b>25</b>	<b>50</b>	<b>20</b>	<b>25</b>	<b>50</b>	<b>25</b>

ATT-Attendance; RM-Resource material; ; PT- Practice teaching; RP- Rotation Plan/construction of test; W/ISE-Workshop/In-service education programme; EE- End Semester Examination

# **(CLINICAL SPECIALTY-I) MEDICAL SURGICAL NURSING-I**

**Course Code: MSN4103**

**Credit Units: 15**

## **Course Description:**

This course is common for the students undergoing clinical speciality-III in neuro science nursing/cardiovascular & thoracic nursing/critical care nursing/oncology nursing/orthopaedic and rehabilitation nursing/nephro & urology nursing, gastroenterology nursing/ geriatric nursing. It is designed to assist students in developing expertise and in depth knowledge in the field of medical Surgical Nursing. It will help students to appreciate the patient as a holistic individual and develop skill to function as a specialized Medical-Surgical Nurse. It will further enable the student to function as educator, manager and researcher in the field of Medical – Surgical Nursing.

## **Course Contents**

### **Module-I**

#### **Introduction**

- Historical development of medical surgical nursing in India
- Current status of health and disease burden in India
- Current concept of health
- Trends & issues in medical surgical nursing
- Ethical & cultural issues in medical surgical nursing
- Rights of patients
- National health policies and national programs related to adult health
- National health policy, special laws & ordinances related to older people
- Five year plans

### **Module II**

#### **Health assessment of patients**

- History taking
- Physical examination of various systems
- Nutrition assessment
- Related investigations and diagnostic assessment

### **Module III**

#### **Care in hospital settings**

- Ambulatory settings
- Acute and critical care
- Long term care
- Home health care
- Characteristics, care models, practice settings, interdisciplinary team
- Hospitalization- effects of hospitalization on patient & family
- Stressors & reaction related to disease process
- Nursing care using nursing process

#### **Module IV**

##### **Management of patients with disorders of Gastro intestinal tract**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

#### **Module V**

##### **Management of patients with disorders of nervous system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

#### **Module VI**

##### **Management of patients with disorders of respiratory system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

#### **Module VII**

##### **Management of patients with disorders of cardiovascular system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

#### **Module VIII**

##### **Management of patients with disorders of blood**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment

- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module IX**

#### **Management of patients with disorders of genito-urinary system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module X**

#### **Management of patients with disorders of endocrine system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module XI**

#### **Management of patients with disorders of musculo-skeletal system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module XII**

#### **Management of patients with disorders of integumentary system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module XIII**

#### **Management of patients with disorders of eye and ENT**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module XIV**

#### **Management of patients with disorders of reproductive system**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### **Module XV**

#### **Geriatric nursing**

- Nursing assessment
- Aging
- Demography- myths & realities
- Concepts and theories of aging
- Normal biological aging
- Age related body systems changes
- Psychosocial aspects of aging
- Medications and elderly
- Stress and coping in older adults
- Common health problems and nursing management
- Psychosocial and sexual patterns
- Abuse of elderly
- Role of nurse for care of elderly: ambulation, nutritional, communication, psychosocial and spiritual
- Use of aids and prosthesis
- Legal and ethical issues
- Provisions and programmes for elderly: privileges, community programs and health services Issues problems and trends

### **Module XVI**

#### **Management of patients with disorders of communicable and sexually transmitted diseases**

- Review of related anatomy and physiology
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends

- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

## Module XVII

### Emergency, trauma and multi-system organ failure

- DIC
- Trauma, burns, poisoning
- Disorders – etiology, pathophysiology, clinical manifestations, complications, prognosis.
- Health assessment- history taking, physical examination, investigation & diagnostic assessment
- Treatment modalities and trends
- Nursing management
- Related research studies
- Evidence based nursing practice
- Rehabilitation and follow up.

### Examination Scheme:

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA-Extracurricular activity; EE- End Semester Examination

### REFERENCES:

- Black M.J., Hawks H.J, *Medical Surgical Nursing, Clinical Management for Positive Outcome*, 7<sup>th</sup> edition, Saunders, Elsevier Publication.
- Morton, Patricia, et. al. *Critical Care Nursing: A Holistic Approach*, Lippincott Williams and Wilkins; Eighth edition.
- Urban, A.N., Greenlac K.K, “*Guidelines for Critical Care Nursing*, Mosby.
- Wood L.S., Frelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkings.
- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
- Lewis, Collier & Heitkemper, *Medical Surgical Nursing Assessment and Management of Clinical Problems*.
- Baughman Diane C, *Hand Book for Surgical Nursing*, 2nd edition, published by Lipincott, NewYork.
- Philip & Wilma J, *Medical- Surgical Nursing*, 3<sup>rd</sup> edition, published by B.T Pubn Bangalore.

# Syllabus - Second Semester

## ADVANCE NURSING PRACTICE

**Course Code: MSN4201**

**Credit Units: 21**

### **Course Description:**

The course is designed to develop an understanding of concepts and constructs of theoretical basis of advance nursing practice and critically analyze different theories of nursing and other disciplines.

### **Course Contents**

#### **Module I**

##### **Nursing as a Profession**

- History of development of nursing profession, characteristics, criteria of the profession, perspective of nursing profession-national, global
- Code of ethics(INC), code of professional conduct(INC), autonomy and accountability, assertiveness, visibility of nurses, legal considerations
- Role of regulatory bodies
- Professional organizations and unions-self defense, individual and collective bargaining
- Educational preparations, continuing education, career opportunities, professional advancement & role and scope of nursing education.
- Role of research, leadership and management.
- Quality assurance in nursing (INC).
- Futuristic nursing.

#### **Module II**

##### **Health care delivery**

- Health care environment, economics, constraints, planning process, policies, political process vis a vis nursing profession.
- Health care delivery system- national, state, district and local level.
- Major stakeholders in the health care system-Government, non-govt, Industry and other professionals.
- Patterns of nursing care delivery in India.
- Health care delivery concerns, national health and family welfare programs, inter-sectoral coordination, role of nongovernmental agencies.
- Information, education and communication (IEC).
- Tele-medicine.

#### **Module III**

##### **Genetics**

- Review of cellular division, mutation and law of inheritance, human genome project, The Genomic era.
- Basic concepts of Genes, Chromosomes & DNA.
- Approaches to common genetic disorders.
- Genetic testing – basis of genetic diagnosis, Pre symptomatic and predisposition testing, Prenatal diagnosis & screening, Ethical, legal & psychosocial issues in genetic testing.
- Genetic counselling.
- Practical application of genetics in nursing.



## **Module IV**

### **Epidemiology**

- Scope, epidemiological approach and methods,
- Morbidity, mortality,
- Concepts of causation of diseases and their screening,
- Application of epidemiology in health care delivery, Health surveillance and health informatics
- Role of nurse

## **Module V**

### **Bio-Psycho social pathology**

- Pathophysiology and Psychodynamics of disease causation.
- Life processes, homeostatic mechanism, biological and psycho-social dynamics in causation of disease, life style.
- Common problems: Oxygen insufficiency, fluid and electrolyte imbalance, nutritional problems, hemorrhage and shock, altered body temperature, unconsciousness, sleep pattern and its disturbances, pain, sensory deprivation.
- Treatment aspects: pharmacological and pre- post operative care aspects,
- Cardio pulmonary resuscitation.
- End of life Care
- Infection prevention (including HIV) and standard safety measures, bio-medical waste management.
- Role of Nurse- Evidence based Nursing practice; Best practices
- Innovations in Nursing.

## **Module VI**

### **Philosophy and Theories of Nursing**

- Values, Conceptual Models, Approaches.
- Nursing theories: Nightingale's, Henderson's, Roger's, Peplau's, Abdella's, Lewine's, Orem's, Johnson's, King's, Neuman's, Roy's, Watson Parsce, etc and their applications,
- Health belief models, communication and management, etc
- Concept of Self health.
- Evidence based practice model.

## **Module VII**

### **Nursing process approach**

- Health Assessment- illness status of patients/clients (Individuals, family, community), Identification of health illness problems, health behaviors, signs and symptoms of clients.
- Methods of collection, analysis and utilization of data relevant to Nursing Process. Formulation of nursing care plans, health goals, implementation, modification and evaluation of care.

## **Module VIII**

### **Psychological aspects and Human relations**

- Human behavior, Life processes & growth and development, personality development, defense mechanisms,
- Communication, interpersonal relationships, individual and group, group dynamics, and organizational behavior,
- Basic human needs, Growth and development, (Conception through preschool, School age through adolescence, Young & middle adult, and Older adult)
- Sexuality and sexual health.
- Stress and adaptation, crisis and its intervention, Coping with loss, death and grieving,
- Principles and techniques of Counseling.

## **Module IX**

### **Nursing practice**

- Framework, scope and trends.
- Alternative modalities of care, alternative systems of health and complimentary therapies.
- Extended and expanded role of the Nurse, in promotive, preventive, curative and restorative health care delivery system in community and institutions.
- Health promotion and primary health care.
- Independent practice issues: - Independent Nurse-midwifery practitioner.
- Collaboration issues and models-within and outside Nursing.
- Models of Prevention,
- Family Nursing, Home Nursing,
- Gender sensitive issues and women empowerment.
- Disaster Nursing.
- Geriatric considerations in Nursing.
- Evidence based Nursing practice- best practices
- Trans-cultural Nursing.

## **Module X**

### **Computer applications for patient care delivery system and Nursing Practice**

- Use of computers in teaching, learning, research and Nursing practice.
- Windows, MS office: Word, Excel, Power Point,
- Internet, literature search,
- Statistical packages,
- Hospital management information system: software.

### **Practical**

Clinical posting in the following areas:

- Specialty area- in-patient unit - 2 weeks
- Community health center/PHC - 2 weeks
- Emergency/ICU - 2 weeks

### **Activities**

- Prepare Case studies with Nursing process approach and theoretical basis
- Presentation of comparative picture of theories
- Family case- work using model of prevention
- Annotated bibliography
- Report of field visits (5)

### **Advance Nursing Procedures**

Definition, Indication and Nursing implications; CPR, TPN, Hemodynamic monitoring, Endotracheal intubation, Tracheostomy, mechanical ventilation, Pacemaker, Hemodialysis, Peritoneal dialysis, LP, BT Pleural and abdominal paracentesis, OT techniques, Health assessment, Triage, Pulse oximetry.

**Examination Scheme:**

<b>Components</b>	<b>ATT</b>	<b>HA</b>	<b>CT</b>	<b>SE</b>	<b>EA</b>	<b>EE</b>
<b>Weightage (%)</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>75</b>

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

**Text & References:**

- Potter A. P. & Perry A. G, *Fundamental of Nursing*, C. V. Mosby Co., 2005, St. Louis.
- Kozier B. et al, *Fundamentals of Nursing Concepts, Process and Practice*, Pearson Education, Inc, 2004.
- Brunner and Suddarth, *Text Book of Medical Surgical Nursing*, 2002.
- Zwemer A, *Professional Adjustments and Ethics for Nurse in India*, BI publications, 1995, Bangalore.
- Rosdhal, *Fundamentals of Nursing*, Lippincott Co., 2003.
- Taylor Carol, et al, *Fundamentals of Nursing*, Lippincott Co., 2005.
- Basavanthappa B. T, *Nursing Theories*, Jaypee Brothers, 2007, New Delhi.
- Alligood M. R. & Tomey A. M, *Nursing Theory Utilization and Application*, Mosby, St. Louis.
- Park J.E., *Text Book of Preventive and Social Medicine*, Banarsidas Bhanot, Jabalpur

\* Latest editions of all the suggested books are recommended.

# NURSING RESEARCH AND STATISTICS

Course Code: MSN4202

Credit Units: 18

## Course Description:

The course is designed to assist the students to acquire an understanding of the research methodology and statistical methods as a basis for identifying research problem, planning and implementing a research plan. It also enables the students to evaluate research studies and utilize research findings to improve quality of Nursing practice, education and management. It will further enable the students to develop an understanding of the statistical methods and apply them in conducting research studies in Nursing.

## Part-A: Nursing Research

### Course Content

#### Module I

##### Introduction:

- Methods of acquiring knowledge – problem solving and scientific method.
- Research – Definition, characteristics, purposes, kinds of research
- Historical Evolution of research in Nursing
- Basic research terms
- Scope of Nursing research: areas, problems in Nursing, health and social research
- Concept of evidence based practice
- Ethics in research
- Overview of Research process

#### Module II

##### Review of Literature

- Importance, purposes, sources, criteria for selection of resources and steps in reviewing literature.

#### Module III

##### Research Approaches and designs

- Type: Quantitative and Qualitative
- Historical, survey and experimental –Characteristics, types advantages and disadvantages
- Qualitative: Phenomenology, grounded theory, ethnography

#### Module IV

##### Research problem:

- Identification of research problem
- Formulation of problem statement and research Objectives:
- Definition of terms
- Assumptions and delimitations
- Identification of variables
- Hypothesis – definition, formulation and types.

#### Module V

##### Developing theoretical/conceptual framework

- Theories: Nature, characteristics, Purpose and uses
- Using, testing and developing conceptual framework, models and theories.

## **Module VI**

### **Sampling**

- Population and sample
- Factors influencing sampling
- Sampling techniques
- Sample size
- Probability and sampling error
- Problems of sampling

## **Module VII**

### **Tools and methods of Data collection:**

- Concepts of data collection
- Data sources, methods/techniques quantitative and qualitative.
- Tools for data collection – types, characteristics and their development
- Validity and reliability of tools
- Procedure for data collection

## **Module VIII**

### **Implementing research plan**

- Pilot Study, review research plan (design), planning for data collection, Administration of tool /interventions, collection of data

## **Module IX**

### **Analysis and interpretation of data**

- Plan for data analysis: quantitative and qualitative
- Preparing data for computer analysis and presentation.
- Statistical analysis
- Interpretation of data
- Conclusion and generalizations
- Summary and discussion

## **Module X**

### **Reporting and utilizing research findings:**

- Communication of research results; oral and written
- Writing research report purposes, methods and style Vancouver, American Psychological Association (APA), Campbell etc.
- Writing scientific articles for publication: purposes & style

## **Module XI**

- Critical analysis of research reports and articles

## **Module XII**

- Developing and presenting a research proposal

## **Part-B: Statistics**

### **Module I**

#### **Introduction:**

- Concepts, types, significance and scope of statistics, meaning of data,
- Sample, parameter
- Type and levels of data and their measurement
- Organization and presentation of data - Tabulation of data;
- Frequency distribution
- Graphical and tabular presentations.

### **Module II**

#### **Measures of central tendency:**

- Mean, Median, Mode

### **Module III**

#### **Measures of variability;**

- Range, Percentiles, average deviation, quartile deviation, standard deviation

### **Module IV**

#### **Normal Distribution:**

- Probability, characteristics and application of normal probability curve; sampling error.

### **Module V**

#### **Measures of relationship:**

- Correlation – need and meaning
- Rank order correlation
- Scatter diagram method
- Product moment correlation
- Simple linear regression analysis and prediction.

### **Module VI**

#### **Designs and meaning:**

- Experimental designs
- Comparison in pairs, randomized block design, Latin squares.

### **Module VII**

#### **Significance of Statistic and Significance of difference between two Statistics (Testing hypothesis)**

- Non parametric test – Chi-square test, Sign, median test, Mann Whitney test.
- Parametric test – ‘t’ test, ANOVA, MANOVA, ANCOVA

### **Module VIII**

#### **Use of statistical methods in psychology and education:**

- Scaling – Z score, Z Scaling
- Standard Score and T Score
- Reliability of test Scores: test-retest method, parallel forms, split half method.

## Module IX

### Application of statistics in health:

- Ratios, Rates, Trends
- Vital health statistics – Birth and death rates.
- Measures related to fertility, morbidity and mortality

## Module X

### Use of Computers for data analysis

- Use of statistical package.

### Activities: Research

- Annotated Bibliography of research reports and articles.
- Review of literature of selected topic and reporting
- Formulation of problem statement, objective and hypothesis
- Developing theoretical/conceptual framework.
- Preparation of a sample research tool
- Analysis and interpretation of given data
- Developing and presenting research proposal
- Journal club presentation
- Critical evaluation of selected research studies
- Writing a scientific paper.

### Activities Statistics

- Exercises on organization and tabulation of data
- Graphical and tabular presentation of data
- Calculation of descriptive and inferential statistics (chi square, t-test, correlation)
- Practice in using statistical package
- Computing vital health statistics

### Examination Scheme:

Components	Nursing Research=15					Statistics = 10		EE* = 75	
	ATT	HA	CT	SE	EA	CT	SE	NR	ST
Weightage (%)	5	2	3	3	2	5	5	50	25

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity - Project; EE- End Semester Examination ; NR – Nursing Research ; ST – Statistics.

EE\* - For the end semester examination of this course, the distribution of marks in question paper will be: Nursing Research= 50 marks & Statistics = 25 marks

## **Text & References:**

### **Reference Books:**

- Polit, D.F. & Bleck C.T, *Nursing Research Principles & Methods*, Lippincott Williams Wilkins, 2004, New York.
- Polit, Bleck & P. Hungler, *Nursing Research Methods, Appraisal & Utilization*, 2001, Lippincott.
- Mahajan, B.K, *Methods in Biostatistics*, Jaypee Brothers, 1999, New Delhi.
- Rose Hott & Budin. Notter's, *Essentials of Nursing Research*, spinger publisher, 1999, New York.
- Patricial Nunhall. *Nursing Research*, James & Bar, 2001, Canada.
- Caroly M.H, *Research Methods for Clinical Therapists Applied Project Design and Analysis*, 1999, Churchill Livingstone.
- P.K. Indrani, T.K, *Research Methods for Nurses*. Jaypee brothers, 2005.
- Clifford et al, *Getting Research into Practice*, Churchill Livingstone, 2004, New York.
- Freshwater D. & Bishop V, *Nursing Research in Context*, Palgrave Macmillan, 2004, New York.
- Macnee C. L, *Understanding Nursing Research: Reading & Using Research in Practice*, Lippincott Williams, Wilinks, 2004, London.
- Specials & Carpenter, *Qualitative Research in Nursing Advancing the Humanistic Imperative*, Lippincott Williams. 2007
- Basavanthappa, B.T, *Nursing Research*, Jaypee Brothers, 2003, New Delhi.

\* Latest editions of all the suggested books are recommended

### **Journals:**

- Journal of nursing practice and research.
- Indian journal of medical ethics



**(CLINICAL SPECIALTY-II PRACTICAL)**  
**MEDICAL SURGICAL NURSING CS-I & II PRACTICAL**

**Course Code: MSN4203**

**Credit Unit: 22**

**Course Description:** The course is designed to enable students to develop expertise in the field of clinical specialization. It will help students to appreciate the patient as a holistic individual and develop skill to function as a Nurse specialist in their field of clinical specialization.

**Course Contents**

**Students will be posted in following areas:**

General Medical Ward 120 Hours

General Surgical Ward 120 Hours

ICUs 120 Hours

Oncology 60 Hours

Ortho 60 Hours

Cardio 60 Hours

Emergency Department 60 Hours

Neuro 60 Hours

**Total 660 Hours (22 Weeks)**

**Student Activities:**

- Clinical presentations
- History taking
- Health Assessment
- Nutritional Assessment
- Health Education related to disease conditions
- Case studies
- Project work
- Field visits

**Examination Scheme Practical:**

<b>Components</b>	<b>NCP</b>	<b>CS/CP</b>	<b>Pr</b>	<b>OR</b>	<b>HE</b>	<b>CE</b>	<b>EPE</b>
<b>Weightage (%)</b>	<b>10</b>	<b>30</b>	<b>10</b>	<b>05</b>	<b>05</b>	<b>40</b>	<b>100</b>

NCP- Nursing Care Plan, CS- Case Study, CP - Case Presentation, Pr- Project, OR- Observation Report, HE- Health Education, CE-Clinical Evaluation, EPE- External Practical Examination

# Syllabus - Third Semester

## (CLINICAL SPECIALTY-III) CARDIOTHORACIC AND VASCULAR NURSING

**Course Code: MSN4301**

**Credit Units: 16**

### **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/nurse specialist. It will further enable the student to function as educator, manager and researcher in the field of cardio vascular and thoracic Nursing.

### **Course Content**

#### **Module I**

##### **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)

#### **Module II**

##### **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

#### **Module III**

##### **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.

#### **Module IV**

##### **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, 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: Bronchoscope and graphics
- 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

## **Module V**

### **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

## **Module VI**

### **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

## **Module VII**

### **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

## **Module VIII**

### **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

## **Module IX**

### **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
- 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.

## **Module X**

### **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.

## **Module XI**

### **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.
- Antilipemics
- Principles of drug Administration, role and responsibilities of Nurses and care of
- Drugs

## **Module XII**

### **Nursing Care of patient undergoing cardio thoracic surgery**

- Indications, selection of patient
- Preoperative assessment and preparation; counseling.
- Intraoperative care: Principles of open heart surgery, equipment, anesthesia, cardiopulmonary by pass.
- 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: lobotomy, pneumonectomy, tumor 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.
- Follow up care

## **Module XIII**

### **Cardiac rehabilitation**

- Process
- Physical evaluation
- Life style modification
- Physical conditioning for cardiovascular efficiency through exercise
- Counseling
- Follow up care

## **Module XIV**

### **Intensive Coronary Care units/intensive cardio thoracic units:**

- 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 in-service educational programme and teaching

**Examination Scheme:**

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

**Text & References:**

- Finkelmeir, Betsy A., *Cardiothoracic Surgical Nursing*, Philadelphia: Lipincott, 2000
- Woods, Susan L. *Cardiac Nursing*, 3<sup>rd</sup> Edition Philadelphia;: JB Lipincott Co
- Meltzer, Concept and Practices of Intensive care for Nurse Specialists 2<sup>nd</sup> edition Philadelphia: Charles Press Publications
- Black M.J., Hawks H.J, *Medical Surgical Nursing, Clinical Management for Positive Outcome*, Saunders, Elsevier.
- Urban, A.N., Greenlac K.K, *Guidelines for Critical Care Nursing*, Mosby.
- Wood L.S., Frelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkings.
- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
- Philip & Wilma J, *Medical- Surgical Nursing*, B.T Publication Bangalore.

\* Latest editions of all the suggested books are recommended.

# **(CLINICAL SPECIALTY-III) CRITICAL CARE NURSING**

**Course Code: MSN4302**

**Credit Units: 16**

## **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.

## **Course Contents**

### **Module I**

#### **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

### **Module II**

#### **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 Units:-therapeutic touch, Relaxation, Music therapy, Guided Imagery, acupressure
- Stress and burnout syndrome among health team members

### **Module III**

#### **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



## **Module IV**

### **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

## **Module V**

### **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

## **Module VI**

### **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

## **Module VII**

### **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 venous hemodialysis, Renal Transplant,

## **Module VIII**

### **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, Guille in Barre-Syndrome, Masthenia 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

## **Module IX**

### **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)

## **Module X**

### **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)
- Ophthalmic: Eye injuries, Glaucoma, retinal detachment
- Ear Nose Throat: Foreign bodies, stridor, bleeding, quincy, acute allergic conditions
- Psychiatric emergencies:, suicide,
- Crisis intervention

## **Module XI**

### **Cardiovascular emergencies**

- Principles of Nursing in caring for patient's with cardiovascular disorders
- Assessment: Cardiovascular system: Heart sounds, Diagnostic studies:- Cardiac enzymes studies, Electrocardiography 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

## **Module XII**

### **Respiratory System**

- Acid-base balance & imbalance
- Assesment: 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 asthmatics, interstitial drug 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

## **Module XIII**

### **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

#### **Module XIV**

##### **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

#### **Module XV**

##### **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 hypertropic pyloric stenosis, imperforate anus
- Paediatric emergencies
- Dehydration, Acute broncho pneumonia, Acute respiratory distress syndrome, Poisoning, Foreign bodies, seizures, traumas, Status asthmaticus

#### **Module XVI**

##### **Legal and ethical issues in critical care-Nurse's role**

- Brain death
- Organ donation & Counseling
- Do Not Resuscitate (DNR)
- Euthanasia
- Living will

#### **Module XVII**

##### **Quality assurance**

- Standards, Protocols, Policies, Procedures
- Infection control; Standard safety measures
- Nursing audit
- Staffing
- Design of ICU / CCU

**Examination Scheme:**

<b>Components</b>	<b>ATT</b>	<b>HA</b>	<b>CT</b>	<b>SE</b>	<b>EA</b>	<b>EE</b>
<b>Weightage (%)</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>75</b>

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

**Text & References:**

- Meltzer, Concept and Practices of Intensive care for Nurse Specialists 2<sup>nd</sup> edition Philadelphia: Charles Press Publications
- Black M.J., Hawks H.J, *Medical Surgical Nursing, Clinical Management for Positive Outcome*, Saunders, Elsevier.
- Urban, A.N., Greenlac K.K, *Guidelines for Critical Care Nursing*, Mosby.
- Wood L.S., Frelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkings.
- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
- Baughman Diane C, *Hand Book for Surgical Nursing*, Lipincott, NewYork.
- Philip &Wilma J, *Medical- Surgical Nursing*, B.T Publication Bangalore.
- Richardved Lee, *Medical Case of the Pregnant Patient*, American College, Philadelphia.

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## **(CLINICAL SPECIALTY-III) ONCOLOGY NURSING**

**Course Code: MSN4303**

**Credit Units: 16**

### **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

### **Course Contents**

#### **Module I**

##### **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

#### **Module II**

##### **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

#### **Module III**

##### **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.

#### **Module IV**

##### **Diagnostic Evaluation**

- Health assessment: History taking, physical examination,
- Staging and grading of tumors,
- TNM Classification
- Common diagnostic tests:

- Blood investigation: Hematological, 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

## **Module V**

### **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.

## **Module VI**

### **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 equipment: 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-Radio sensitivity, treatment effects
  - Complications of radiotherapy
  - Radiation safety: Standards of Bhabha Atomic Research Centre (BARC)

- **Bone Marrow Transplantation /Stem Cell Transplantation**
  - 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
- **Immunotherapy (Biotherapy)**
  - Concepts and principles
  - Classification of agents
  - Treatment and applications
- **Gene Therapy**
  - Current Concepts and practices
- **Alternative and Complementary Therapies**
  - Current practices

## **Module VII**

### **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

## **Module VIII**

### **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

## **Module IX**

### **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

## **Module X**

### **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)

## **Module XI**

### **Paediatric malignancies**

- Leukemia, Lymphoma, Neuro- blastoma
- Wilm's tumor, Soft tissue sarcoma, Retinoblastoma
- Nursing Management of children with Paediatric Malignancies

## **Module XII**

### **Nursing Management of Physiological Conditions and Symptoms of Cancer Patient**

- Nutrition: - 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



### **Module XIII**

#### **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

### **Module XIV**

#### **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.

### **Module XV**

#### **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

#### **Examination Scheme:**

<b>Components</b>	<b>ATT</b>	<b>HA</b>	<b>CT</b>	<b>SE</b>	<b>EA</b>	<b>EE</b>
<b>Weightage (%)</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>75</b>

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

## **Text & References:**

### **References:**

- Black M.J., Hawks H.J, Medical Surgical Nursing, Clinical Management for Positive Outcome, 7<sup>th</sup> edition, Saunders, Elsevier.
- Urban, A.N., Greenlac K.K, "Guidelines for Critical Care Nursing, Mosby.
- Wood L.S., Frelicher S.E, Fetal Cardiac Nursing, Lippincott Williams & Wilkings.
- Gulanic, Klopp, Galnes, Fetal Nursing Care Plans Nursing Diagnosis and intervention.
- Lewis, Collier & Heitkemper, Medical Surgical Nursing Assessment and Management of Clinical Problems.
- Baughman Diane C, Hand Book for Surgical Nursing, 2nd edition, published by Lipincott, NewYork.
- Philip & Wilma J, Medical- Surgical Nursing, 3<sup>rd</sup> edition, published by B.T Pubn Bangalore.
- Richardved Lee, Medical Case of the Pregnant Patient, 2<sup>nd</sup> edition, American College, Philadelphia.

\* Latest editions of all the suggested books are recommended.

# **(CLINICAL SPECIALTY-III) NEUROSCIENCES NURSING**

**Course Code: MSN4304**

**Credit Unit: 16**

## **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 urological 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.

## **Course Contents**

### **Module I**

#### **Introduction**

- Introduction to neuroscience (neurological and neurosurgical) Nursing
- History-Development in neurological and Neurosurgical Nursing, Service & education
- Emerging trends and issues in neurology and Neurosurgery 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

### **Module II**

#### **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

### **Module III**

#### **Review of Anatomy and physiology**

- Embryology
- Structure and functions of Nervous system- CNS, ANS, cerebral circulation,
- Cranial and spinal nerves and reflexes, motor and sensory, functions of sensory organs

### **Module 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
- Nurse’s role in diagnostic tests

## **Module V**

### **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

## **Module VI**

### **Drugs used in neurological and neurosurgical disorders**

- Classification
- Indications, contraindications, actions and effects, toxic effects
- Role of Nurse

## **Module VII**

### **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

## **Module VIII**

### **Cerebrovascular 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.

## **Module IX**

### **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

## **Module X**

### **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.

## **Module XI**

### **Paroxysmal disorders.**

- Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and Nursing management of
  - Epilepsy and seizures.
  - Status epilepticus.
  - Syncope.
  - Meniere's syndrome.
  - Cephalgia.

## **Module XII**

### **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.
  - Cerebrovascular system anomalies.
  - Cerebral palsies.
  - Down's syndrome

### **Module XIII**

#### **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.
  - Meniere’s disease
  - Carpal tunnel syndrome
  - Peripheral neuropathies

### **Module XIV**

#### **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,

### **Module XV**

#### **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

### **Module XVI**

#### **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

### **Module XVII**

#### **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
- **Speech & Language**.- Neurogenic communication disorders, Speech therapy

### Module XVIII

#### Ethical and legal issues in neuroscience Nursing

- Brain death and organ transplantation
- Euthanasia
- Negligence and malpractice
- Nosocomial infections

### Module XIX

- 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

#### Examination Scheme:

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

#### Text & References:

##### Reference Books:

- Black M.J. & Hawks H.J, *Medical Surgical Nursing, Clinical Management for Positive Outcome*, Saunders, Elsevier.
- Urban, A.N., Greenlac K.K, *Guidelines for Critical Care Nursing*, Mosby.
- Wood L.S., Frelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkins.
- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and Intervention*.
- Lewis, Collier & Heitkemper, *Medical Surgical Nursing Assessment and Management of Clinical Problems*.
- Baughman Diane C, *Hand Book for Surgical Nursing*, Lipincott, NewYork.
- Philip & Wilma J, *Medical- Surgical Nursing*, B.T Publication Bangalore.
- Richardved Lee, *Medical Case of the Pregnant Patient*, American College, Philadelphia.

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## **(CLINICAL SPECIALTY-III) NEPHRO-UROLOGY NURSING**

**Course Code: MSN4305**

**Credit Unit: 16**

### **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

### **Course Contents**

#### **Module I**

##### **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 unit)

#### **Module II**

##### **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- 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

#### **Module III**

##### **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

#### **Module IV**

##### **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 scan, biopsy, endoscopy-cystoscopy, urodynamics studiescystometrogram, urinary flow study, sphincter electromyography, voiding pressure flow study, videourodynamics, Whitaker study Interpretation of diagnostic measures.
- Nurse's role in diagnostic tests

## **Module V**

### **Renal immunopathology/Immunopathology**

- General Concept of immunopathology
- Immune mechanism of glomerular vascular disease
- Role of mediator systems in glomerular vascular disease

## **Module VI**

### **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,

## **Module VII**

### **Glomerular disorders and Nursing management**

- Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical , surgical and Nursing management of
- Glomerulo 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

## **Module VIII**

### **Management of Renal emergencies**

- Anuria
- Acute Renal failure
- Poisoning
- Trauma

- Urine retention
- Acute graft rejection
- Hematuria
- Nurse's role

### **Module IX**

#### **Drugs used in urinary disorders**

- Classification
- Indications, contraindications, actions and effects, toxic effects
- Role of Nurse

### **Module X**

#### **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
- Records and reports

### **Module XI**

- 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 Paediatric 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
- Cadaveric transplantation

### **Module XII**

- 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
- Family and patient teaching

### Module XIII

#### Pediatric Urinary Disorders

- Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, medical , surgical and Nursing management of children with Renal Diseases -UTI, ureteral reflux, glomerulo nephritis, nephrotic syndrome infantile nephrosis, cystic kidneys, familial factors in renal diseases in childhood, Haemolytic uraemic syndrome. Benign recurrent haemturia, nephropathy, wilms’ tumour

### Module XIV

#### 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
- Ethical and legal issues

### Module XV

- Quality assurance in nephrological Nursing practice
- Role of advance practitioner in nephrological Nursing
- Professional practice standards
- Quality control in nephrological Nursing
  - Nursing audit

#### Examination Scheme:

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

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- Wood L.S., Freelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkings.
- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
- Lewis, Collier & Heitkemper, *Medical Surgical Nursing Assessment and Management of Clinical Problems*.
- Baughman Diane C, *Hand Book for Surgical Nursing*, 2nd edition, published by Lipincott, NewYork.
- Philip &Wilma J, *Medical- Surgical Nursing*, 3<sup>rd</sup> edition, published by B.T Pubn Bangalore.
- Richardved Lee, *Medical Case of the Pregnant Patient*, 2<sup>nd</sup> edition, American College, Philadelphia.

\* Latest editions of all the suggested books are recommended.

## **(CLINICAL SPECIALTY-III) ORTHOPEDIC NURSING**

**Course Code: MSN4306**

**Credit Unit: 16**

### **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.

### **Course Contents**

#### **Module I**

##### **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

#### **Module II**

##### **Assessment of Orthopedic Patient**

- Health Assessment: History, physical examination- Inspection, palpation, movement, Measurement, muscle strength Testing.
- Diagnostic studies – Radiological studies, Muscle enzymes, serologic studies

#### **Module III**

##### **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

#### **Module IV**

##### **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
- Head injury
- Chest injury
  - Polytrauma
  - Nerve injuries
  - Vascular injuries
  - Soft tissue injuries
  - Sports injuries
  - Amputation

## **Module V**

### **Infections of Bones and Joints**

- Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and Nursing management of:
  - Tuberculosis
  - Osteomyelitis
  - Arthritis
  - Leprosy

## **Module VI**

### **Bone Tumour**

- 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

## **Module VII**

### **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, meningocele, spina bifida,
- Chromosomal disorders.
- Computer related deformities

## **Module VIII**

### **Disorders of the spine**

- Intervertebral disc prolapse, Fracture of the spine
- Low back disorder – Low back pain, PND, spinal stenosis, spondylosis

## **Module IX**

### **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,
- Osteoporosis
- Paget's disease,
- Gout,
- Gigantism,
- Dwarfism,
- Acromegaly.
- Therapeutic diets for various orthopedic disorders

## **Module X**

### **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

## **Module XI**

### **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

## **Module XII**

### **Orthopedic Disorders in Children:**

- General and special consideration on Paediatric orthopedics
- Genetic disorders
- Congenital anomalies
- Growth disorders
- Genetic counseling
- Nurses role in genetic counseling

## **Module XIII**

### **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

## **Module XIV**

### **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

## **Module XV**

### **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

## **Module XVI**

### **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

## Module XVII

### 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.
- 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.

## Module XVIII

### Quality assurance

- Standards, Protocols, Policies, Procedures
- Nursing audit
- Staffing
- Design of orthopedic, physiotherapy and rehabilitation Unit

### Examination Scheme:

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

### Text & References:

#### References:

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- Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
- Lewis, Collier & Heitkemper, *Medical Surgical Nursing Assessment and Management of Clinical Problems*.
- Baughman Diane C, *Hand Book for Surgical Nursing*, 2nd edition, published by Lipincott, NewYork.
- Philip &Wilma J, *Medical- Surgical Nursing*, 3<sup>rd</sup> edition, published by B.T Pubn Bangalore.
- Richardved Lee, *Medical Case of the Pregnant Patient*, 2<sup>nd</sup> edition, American College, Philadelphia.

\* Latest editions of all the suggested books are recommended.



## **(CLINICAL SPECIALTY-III) GASTRO ENTEROLOGY NURSING**

**Course Code: MSN4307**

**Credit Units: 16**

### **Course Description:**

This course is designed to assist students in developing expertise and indepth 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

### **Course Contents**

#### **Module I**

##### **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)

#### **Module II**

##### **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

#### **Module III**

##### **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

#### **Module IV**

##### **Assessment and diagnostic measures**

- History taking
- Physical assessment, psychosocial assessment
- Diagnostic tests
  - Radiological studies: Upper GIT- barium swallow, lower GIT Barium enema,
  - Ultra sound:
  - Computed tomography
  - MRI
  - Cholangiography: Percutaneous transheptatic Cholangiogram(PTC)
  - Magnetic Resonance Cholangio pancreotography (MRCP)

- Nuclear imaging scans(scintigraphy)
- Endoscopy
- Colonoscopy
- Proctosigmoidoscopy
- Endoscopic Retrograde Cholangio pancreatography (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 metabolismserum cholesterol Interpretation of diagnostic measures
- Nurse's role in diagnostic tests

## Module V

### 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, Oesophageal 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 Diarrhea

**Anorectal Conditions:** Hemorrhoids, Anal fissure, anal fistula, Abscess, Strictures, Rectal prolapse, Pruritis ani, Pelonidal disease, Anal condylomas, Warts

## Module VI

### 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

## **Module VII**

### **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

## **Module VIII**

- **Congenital Anomalies of Esophagus**
  - Esophageal atresia
  - Tracheo esophageal fistula
  - 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**

## **Module IX**

### **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

## **Module X**

### **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

### Module XI

#### 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

### Module XII

#### 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

### Module XIII

#### Education and training in GE care

- Staff orientation, training and development,
- In-service education program,
  - Clinical teaching programs

#### Examination Scheme:

Components	ATT	HA	CT	SE	EA	EE
Weightage (%)	5	5	5	5	5	75

ATT-Attendance; HA-Home Assignment; CT-Class Test; SE-Sessional Examination; EA- Extracurricular activity; EE- End Semester Examination

#### Text & references:

##### References:

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  - Urban, A.N., Greenlac K.K,“*Guidelines for Critical Care Nursing*, Mosby.
  - Wood L.S., Frelicher S.E, *Fetal Cardiac Nursing*, Lippincott Williams & Wilkings.
  - Gulanic, Klopp, Galnes, *Fetal Nursing Care Plans Nursing Diagnosis and intervention*.
  - Lewis, Collier & Heitkemper, *Medical Surgical Nursing Assessment and Management of Clinical Problems*.
  - Baughman Diane C, *Hand Book for Surgical Nursing*, 2nd edition, published by Lipincott, NewYork.
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## Syllabus - Fourth Semester

### NURSING RESEARCH DISSERTATION (PRACTICAL)

Course Code: MSN4437

Credit Units: 10

**Objectives:** During the training the students is expected to learn about research problem, research methodology, statistical methods, research plan and implementation. The knowledge will be utilized for improving the quality of nursing practice and education.

#### Guidelines for Dissertation

Tentative Schedule for dissertation

S. No	Activities	Scheduled Time
1.	Submission of the research proposal	End of March of II semester
2.	Submission of dissertation Final	End of March of IV semester

Note: - Administrative approval and ethical clearance should be obtained

#### Guidelines:

1. During the clinical training a student is supposed to conduct a research study on the basis of area of specialization and nursing management based on his/her interest.
2. Project work would be under the supervision of Main guide and a co-guide appointed by the Principal College of Nursing.
3. There should be a research committee in each college comprising of minimum 5 members chaired by the Principal, College of Nursing.
4. Before the submission of project the student will be require to make a presentation before the research committee through power point presentation.
5. The research project work should cover the following area.
  - i. Introduction of topic and need for the study
  - ii. Review of literature on the selected topic and reporting
  - iii. Formulation of problem statement, objective and hypotheses
  - iv. Development of theoretical/conceptual framework.
  - v. Research methodology conducted during the training period
  - vi. Analysis and interpretation
  - vii. Discussion
  - viii. Summary & Conclusion.
  - ix. Bibliography

#### Maintenance of log book for various activities

#### Examination Scheme

Components	Internal 100					External 100	
	PP	TP	PS	DAP	GE	FP	Pr R/V
Weightage (%)	20	20	15	25	20	50	50

PP -Proposal Presentation; TP- Tool Presentation; PS-Pilot study; DAP- Data Analysis Presentation; GE- Guides' Evaluation; FP – Final Presentation 50; Pr R/V (EE) - Project Report/Viva.

**(CLINICAL SPECIALTY-IV PRACTICAL)**  
**CARDIOTHORACIC & VASCULAR NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4402**

**Credit Units: 32**

**Objectives:** This course is designed to assist students in developing expertise and in depth knowledge in the field of each area of super specialization of Medical Surgical Nursing. It will help students to appreciate the patient as a holistic individual and develop skill to function as a specialized Medical-Surgical Nurse. It will further enable the student to function as educator, manager, care giver and researcher in the field of Medical – Surgical Nursing. Each student is required to maintain the record of following assignment.

**Guidelines:**

**Essential Nursing Skills**

**Procedures Observed**

- Echocardiogram
- Ultrasound
- Monitoring JVP, CVP
- CT SCAN
- MRI
- Pet SCAN
- Angiography
- Cardiac catheterisation
- Angioplasty
- Various Surgeries
- Any other

**Procedures Assisted**

- Arterial blood gas analysis
- Thoracentesis
- Lung biopsy
- Computer assisted tomography (CAT Scan)
- M.R.I.
- Pulmonary angiography
- Bronchoscopy
- Pulmonary function test
- ET tube insertion
- Tracheostomy tube insertion
- Cardiac catheterization
- Angiogram
- Defibrillation
- Treadmill test
- Echo cardiography
- Doppler ultrasound
- Cardiac surgery
- Insertion of chest tube
- CVP Monitoring
- Measuring pulmonary artery pressure by Swan-Ganz Catheter

- Cardiac Pacing

### **Procedures Performed**

- Preparation of assessment tool for CT client (Cardiac, thoracic and vascular).
  - ECG – Recording, Reading, Identification of abnormalities
  - Oxygen therapy – Cylinder, central supply, Catheter, nasal canula, mask, tent Through ET and Tracheostomy tube Manual resuscitation bag
  - Mechanical ventilation
  - Spirometer
  - Tuberculen skin test
  - Aerosal therapy
  - Nebulizer therapy
  - Water seal drainage
  - Chest physiotheray including – Breathing Exercises Coughing Exercises Percussion & Vibration
  - Suctioning – Oropharyngeal, nasotracheal, Endotracheal Through tracheostomy tube.
  - Artificial airway cuff maintenance
  - CPR
  - Care of client on ventilator
  - Identification of different – Arrhythmias Abnormal pulses, respirations B.P. Variation Heart sounds Breath sounds
  - Pulse oxymetry
  - Introduction of intracath
  - Bolus I.V. Injection
  - Life line
  - Maintenance of “Heplock”
  - Subcutaneous of Heparin
  - Obtaining leg measurements to detect early swelling in thrombophlebeta
  - Identification of Homans signs
  - Buerger – Allen exer
- Maintenance of log book for various activities



**(CLINICAL SPECIALTY III & IV PRACTICAL)  
CRITICAL CARE NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4403**

**Credit Units: 32**

**ESSENTIAL CRITICAL CARE NURSING SKILLS**

**I. Procedures Observed**

- CT Scan
- MRI
- EEG
- Hemodialysis
- Endoscopic Retrograde cholangio Pancreaticogram (ERCP)
- Heart/ Neuro / GI. / Renal Surgeries

**II. Procedures Assisted**

- Advanced life support system
- Basic cardiac life support
- Arterial line/arterial pressure monitoring/blood taking
- Arterial blood gas
- ECG recording
- Blood transfusion
- IV Cannulation therapy
- Arterial Catheterization
- Chest tube insertion
- Endotracheal intubations
- Ventilation
- Insertion of central line/cvp line
- Connecting lines for dialysis

**III. Procedure Performed**

1. Airway management
  - Application of oropharyngeal airway
  - Oxygen therapy
  - CPAP (Continuous Positive Airway pressure)
  - Care of tracheostomy
  - Endotracheal extubation
2. Cardiopulmonary resuscitation, Basic cardiac life support, ECG
3. Monitoring of critically ill patients – clinically with monitors, capillary refill time
4. (CRT) assessment of jaundice, ECG.
5. Gastric lavage
6. 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
7. Admission & discharge of critically ill patients
8. Nutritional needs – gastrostomy feeds, pharyngeal feeds, jejunostomy feeds, TPN, formula preparation & patient education.
9. Assessment of patient for alteration in blood sugar levels monitoring blood sugar levels periodically & administering insulin periodically.

10. 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.
11. Setting up dialysis machine and starting, monitoring and closing dialysis
12. Procedures for prevention of infections: Hand washing, disinfection & sterilization surveillance, and fumigation universal precautions.
13. Collection of specimen.
14. Setting, use & maintenance of basic equipment, ventilator, O<sub>2</sub> analyzer, monitoring equipment, transducers, defibrillator, infusion & syringe pumps, centrifuge machine.

**(CLINICAL SPECIALTY-III & IV PRACTICAL)  
ONCOLOGY NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4404**

**Credit Units: 32**

**Procedures Observed**

- CT Scan
- MRI
- PET Scan (Positron Emission Tomography)
- Ultra sound
- Mammography
- Radio Nuclide Imaging
- Bone Scan
- Thyroid Function Test
- Functional and Metabolic Imaging
- Transportation of radioactive materials
- Others

**Procedures Assisted**

- IV cannulation – Open method
- Chemotherapy
- Radiotherapy – Brachytherapy – Low Density Radiation, High Density Radiation.
- Interstitial implantation
- Bio-therapy and Gene therapy
- Teletherapy – Treatment planning
- Bone marrow aspiration and biopsy
- Biopsy – tissue
- FNAC – Fine Needle Aspiration Cytology and biopsy
- Advance Cardiac life support
- Endotracheal intubation
- Defibrillation Ventilation
- Tracheostomy
- Thoracentesis
- Paracentesis
- Lumbar Puncture
- Arterial Blood Gas
- Nerve Block
- Chest tube insertion
- Intercostal drainage
- CVP monitoring

**Procedure Performed**

- Screening for cancer
- Assessment of pain
- Assessment of Nutritional status
- Care of Tracheostomy
- Endotracheal intubation
- Gastric gavage

- Pap smear
- IV cannulation
- Care of surgical flaps
- Care of ostomies
- Blood transfusion and component therapy
- Counseling
- Practice standard safety measures
- Care of dead body and mortuary formalities

**Other procedures (As per the institutional protocol):**

- Alternative therapies

**(CLINICAL SPECIALTY-III & IV PRACTICAL)**  
**NEUROSCIENCES NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4405**

**Credit Units: 32**

**ESSENTIAL NEURO NURSING SKILLS**

**I. Procedures Observed**

- CT scan
- MRI
- PET
- EEG
- EMG
- Sleep pattern studies/Therapy
- Radio graphical studies
- Neuro surgeries
- Nerve conduction studies
- Ultrasound studies
- Any other

**II. Procedures Assisted**

- Advanced Cardiac life support
- Lumbar Puncture
- Biopsies – muscle, nerve and Brain
- Arterial Blood Gas
- ECG Recording
- Blood transfusion
- IV cannulation – open method
- Endotracheal intubation
- Ventilation
- Tracheostomy
- ICP monitoring
- Gama Knife
- Cereberal angiography
- Myelography
- Neuro surgeries

**III. Procedures Performed:**

1. Airway management
  - Application of Oro Pharyngeal Airway
  - Care of Tracheostomy
  - Conduct Endotracheal Intubation
  - use of AMBU bag, artificial respirators
  - 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.

**(CLINICAL SPECIALTY-IV PRACTICAL)**  
**NEPHRO-UROLOGY NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4406**

**Credit Units: 32**

**Procedures**

**I. Procedures Observed**

- CT Scan
- MRI
- Radiographic studies
- Urodynamics
- Hemodialysis
- Renal Surgeries

**II. Procedures Assisted**

- Blood transfusion
- I V cannulation therapy
- Arterial Catheterization
- Insertion of central line/cvp line
- Connecting lines for dialysis
- Peritoneal dialysis
- Renal biopsy
- Endoscopies- Bladder, urethra

**III. Procedure Performed**

- Health assessment
- Insertion of urethral and suprapubic catheters
- Urine analysis
- Catheterisation
- Peritoneal dialysis
- Bladder irrigation
- Care of ostomies
- Care of urinary drainage
- Bladder training
- Care of vascular access
- Setting up dialysis machine and starting, monitoring and closing dialysis
- Procedures for prevention of infections:
- Hand washing, disinfection & sterilization surveillance, and fumigation universal precautions.
- Collection of specimen.
- Administration of drugs: IM, IV injection, IV cannulation & fixation of infusion pump, calculation of dosages, blood Administration. monitoring -fluid therapy, electrolyte imbalance,
- Nutritional needs diet therapy & patient education.
- Counselling

**(CLINICAL SPECIALTY-IV PRACTICAL)**  
**ORTHOPEDIC NURSING CS-III & IV PRACTICAL**

**Course Code: MSN4407**

**Credit Units: 32**

**Practical**

- Clinical practice in orthopedic, physiotherapy and Rehabilitation unit.
- Application of tractions and plaster casts and removal of tractions and plaster casts and other appliances.
- Apply Theories and Nursing Process in the management of patients with orthopedic conditions.
- Provide various types of physical and rehabilitative therapies
- Provide health education on related disease conditions.
- Module management and plan – designing

**Procedures Observed**

- X- Ray
- Ultrasound
- MRI
- C T Scan/bone scans
- Arthroscopy
- Electrothermally – assisted capsule shift or ETAC (Thermal capsulorrhaphy)
- Fluroscopy
- Electromyography
- Myelography
- Discography
- Others

**Procedures Assisted**

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

**Procedures Performed**

- Interpretation of X - ray films.
- Application and removal of splints, casts, and braces.
- Care of tractions – skin and skeletal traction, pin site care.
- Cold therapy.
- Heat therapy
- Hydrotherapy
- Therapeutic exercises
- Use of TENS (Transcutaneous electrical nerve stimulation)
- Techniques of transportation



- Crutch walking, walkers, wheel chair.
- Use of devices for activities of daily living and prevention of deformities.
- Administration of drugs: IV injection, IV cannulation, and Blood transfusion.
- Procedures for prevention of infections: disinfection and sterilization, surveillance, fumigation.
- Special skin/ part preparations for orthopedic surgeries.
- Surgical dressings – Debridement.
- Bladder and bowel training

**(CLINICAL SPECIALITY- IV Practical)**  
**GASTRO ENTEROLOGY NURSING CS-III & IV Practical**

**Course Code: MSN4408**

**Credit Units: 32**

**Procedures Assisted**

- Endoscopy room – Upper G.I. Endoscopy (Diagnostic and therapeutic).
- Sigmoidoscopy
- Colonoscopy
- Polypectomy
- Endoscopic retrograde cholangio pancreatigraphy (ERCP)
- Liver biopsy
- Percutaneous catheter drainage (PCD) of Pseudocyst pancreas
- Abdominal paracentesis
- Percutaneous aspiration of liver abscess
- GE Lab: PT, HbsAg, Markers – A, B, C virus, CBP, ESR, Stool Test

**Procedures Performed**

- History and Physical assessment
- RT intubation / extubation / aspiration/suction
- Gastric lavage and gavage
- Bowel wash
- Therapeutic Diets
- Ostomy feeding
- Stoma care
- Monitoring vital parameters
- Plan of inservice education programme for Nursing staff and Class-IV employees
- Counseling