

Field visits	1 week	<p>Observe the setup, functions and services of CHC, PHC, and SCs/HWCs in urban/rural areas</p> <p>Observe the national nutrition programs</p> <p>Learn the availability and cost of common food items</p> <p>Observe the various methods of water purification Learn the standards of water quality and the water quality tests</p> <p>Observe the methods of purification of milk</p> <p>Observe the hygienic practices in slaughterhouse with regard to meat hygiene</p>	<ul style="list-style-type: none"> <li>• <b>Observational skills:</b> <ul style="list-style-type: none"> <li>○ Water resources and water purification sites</li> <li>○ Water quality tests</li> <li>○ Milk diary</li> <li>○ Slaughterhouse</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Visit to SC/HWC, PHC, CHC</li> <li>• Observation of nutrition programs</li> <li>• Visit to market</li> <li>• Observational visit to water purification site</li> <li>• Observational visit to milk diary</li> <li>• Observational visit to slaughterhouse</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of field visit and observation reports</li> </ul>
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**APPLIED MICROBIOLOGY AND INFECTION CONTROL**  
**INCLUDING SAFETY**

<b>PLACEMENT</b>	:	III SEMESTER
<b>SECTION A &amp; SECTION B</b>	<b>THEORY:</b>	2 Credits (40 Hrs)
	<b>PRACTICAL:</b>	1 Credit (40 Hrs)
		(Lab/Experiential learning- L/E)

**SECTION A: APPLIED MICROBIOLOGY**

<b>THEORY:</b>	1 Credit (20 hours)
<b>PRACTICAL:</b>	½ Credit (20 hours)
	(Lab/Experiential learning- L/E)

**SECTION B: INFECTION CONTROL & SAFETY**

<b>THEORY:</b>	1Credit (20hours)
<b>PRACTICAL:</b>	½ credit (20 hours)
	(Lab/experiential learning - L/E)

**SECTION A: APPLIED MICROBIOLOGY**

**DESCRIPTION:** This course is designed to enable students to acquire understanding of fundamentals of Microbiology, compare and contrast different microbes and comprehend the means of transmission and control of spread by various microorganisms. It also provides opportunities for practicing infection control measures in hospital and community settings.

**COMPETENCIES**

On completion of the course, the students will be able to:

1. Identify the ubiquity and diversity of microorganisms in the human body and the environment
2. Classify and explain the morphology and growth of microbes
3. Identify various types of microorganisms
4. Explore mechanisms by which microorganisms cause disease
5. Develop understanding of how the human immune system counteracts infection by specific and non-specific mechanisms
6. Apply the principles of preparation and use of vaccines in immunization
7. Identify the contribution of the microbiologist and the microbiology laboratory to the diagnosis of infection

## **SECTION B: INFECTION CONTROL & SAFETY**

**THEORY:** 1Credit (20hrs)  
**PRACTICAL:** ½ credit (20 hrs)  
(Lab/experiential learning - L/E)

**DESCRIPTION:** This course is designed to help students to acquire knowledge and develop competencies required for fundamental patient safety and infection control in delivering patient care. It also focuses on identifying patient safety indicators, preventing and managing hospital acquired infections, and in following universal precautions.

### **COMPETENCIES**

The students will be able to:

1. Develop knowledge and understanding of Hospital acquired Infections (HAI) and effective practices for prevention
2. Integrate the knowledge of isolation (Barrier and reverse barrier) techniques in implementing various precautions
3. Demonstrate and practice steps in Hand washing and appropriate use of different types of PPE
4. Illustrate various disinfection and sterilization methods and techniques
5. Demonstrate knowledge and skill in specimen collection, handling and transport to optimize the diagnosis for treatment
6. Incorporate the principles and guidelines of Bio Medical waste management
7. Apply the principles of Antibiotic stewardship in performing the nurses' role
8. Identify patient safety indicators and perform the role of nurse in the patient safety audit process
9. Apply the knowledge of International Patient Safety Goals (IPSG) in the patient care settings
10. Identify employee safety indicators and risk of occupational hazards
11. Develop understanding of the various safety protocols and adhere to those protocols

## COURSE OUTLINE

(Theory-T, Lab/Experiential Learning-L/E)

UNIT	TIME (Hours)		LEARNING OUTCOMES	CONTENT	TEACHING/ LEARNING ACTIVITIES	ASSESSMENT METHODS
	T	P				
I	3		Explain concepts and principles of microbiology and its importance in nursing	<b>Introduction:</b> <ul style="list-style-type: none"> <li>• Importance and relevance to nursing</li> <li>• Historical perspective</li> <li>• Concepts and terminology</li> <li>• Principles of microbiology</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer questions</li> <li>• Objective type</li> </ul>
II	10	10 (L/E)	Describe structure, classification morphology and growth of bacteria  Identify Microorganisms	<b>General characteristics of Microbes:</b> <ul style="list-style-type: none"> <li>• Structure and classification of Microbes</li> <li>• Morphological types</li> <li>• Size and form of bacteria</li> <li>• Motility</li> <li>• Colonization</li> <li>• Growth and nutrition of microbes</li> <li>• Temperature</li> <li>• Moisture</li> <li>• Blood and body fluids</li> <li>• Laboratory methods for Identification of Microorganisms</li> <li>• Types of Staining - simple, differential (Gram's, AFB), special – capsular staining (negative), spore, LPCB, KOH mount.</li> <li>• Culture and media preparation – solid and liquid. Types of media – semi synthetic, synthetic, enriched,</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Demonstration</li> <li>• Experiential Learning through visual</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer questions</li> <li>• Objective type</li> </ul>

				enrichment, selective and differential media. Pure culture techniques – tube dilution, pour, spread, streak plate. Anaerobic cultivation of bacteria		
III	4	6 (L/E)	Describe the different disease producing organisms	<b>Pathogenic organisms</b> <ul style="list-style-type: none"> <li>• Micro-organisms - Cocci — gram positive and gram negative; Bacilli— gram positive and gram negative</li> <li>• Viruses</li> <li>• Fungi -Superficial and Deep mycoses</li> <li>• Parasites</li> <li>• Rodents &amp; vectors <ul style="list-style-type: none"> <li>○ Characteristics, Source, portal of entry, transmission of infection, Identification of disease producing micro-organisms</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Demonstration</li> <li>• Experiential learning through visual</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
IV	3	4(L/E)	Explain the concepts of immunity, hyper sensitivity and immunization	<b>Immunity</b> <ul style="list-style-type: none"> <li>• Immunity-Types, classification</li> <li>• Antigen and antibody reaction</li> <li>• Hypersensitivity reactions</li> <li>• Serological tests</li> <li>• Immunoglobulins – structure, types &amp; properties</li> <li>• Vaccines -types &amp; Classification, storage and handling, cold chain, Immunization for various diseases</li> <li>• Immunization Schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Visit to observe vaccine storage</li> </ul> <p>Clinical practice</p>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Objective type</li> <li>• Visit report</li> </ul>

**SECTION B: INFECTION CONTROL & SAFETY**

**COURSE OUTLINE**

UNIT	TIME (Hours)		LEARNING OUTCOMES	CONTENT	TEACHING/ LEARNING ACTIVITIES	ASSESSMENT METHODS
	T	P				
I	2	2(E)	Summarize the evidence based and effective patient care practices for the prevention of common healthcare associated infections in the healthcare setting	<b>HAI (Hospital acquired Infection)</b> <ul style="list-style-type: none"> <li>• Hospital acquired infection</li> <li>• Bundle approach</li> <li>- Prevention of Urinary Tract Infection (UTI)</li> <li>- Prevention of Surgical Site Infection (SSI)</li> <li>- Prevention of Ventilator Associated events (VAE)</li> <li>- Prevention of Central Line Associated Blood Stream Infection (CLABSI)</li> <li>• Surveillance of HAI – Infection control team &amp; Infection control committee</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture &amp; Discussion</li> <li>• Experiential learning</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge assessment- MCQ, Short answer type</li> </ul>
II	3	4(L)	Demonstrate appropriate use of different types of PPEs and the critical use of risk assessment	<b>Isolation Precautions and use of Personal Protective Equipment (PPE)</b> <ul style="list-style-type: none"> <li>• Types of isolation system, standard precaution and transmission-based precautions (Direct Contact, Droplet, Indirect)</li> <li>• Epidemiology &amp; Infection prevention – CDC guidelines</li> <li>• Effective use of PPE</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration &amp; Re-Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Performance assessment</li> </ul>
III	1	2(L)	Demonstrate the hand hygiene practice and its effectiveness on infection control	<b>Hand Hygiene</b> <ul style="list-style-type: none"> <li>• Types of Hand hygiene.</li> <li>• Hand washing and use of alcohol hand rub</li> <li>• Moments of Hand Hygiene</li> <li>• WHO hand hygiene promotion</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration &amp; Re-demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Performance assessment</li> </ul>
IV	1	2(E)	Illustrates disinfection and sterilization in the healthcare setting	<b>Disinfection and sterilization</b> <ul style="list-style-type: none"> <li>• Definitions</li> <li>• Types of disinfection and</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture Discussion</li> <li>• Experiential</li> </ul>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Objective</li> </ul>

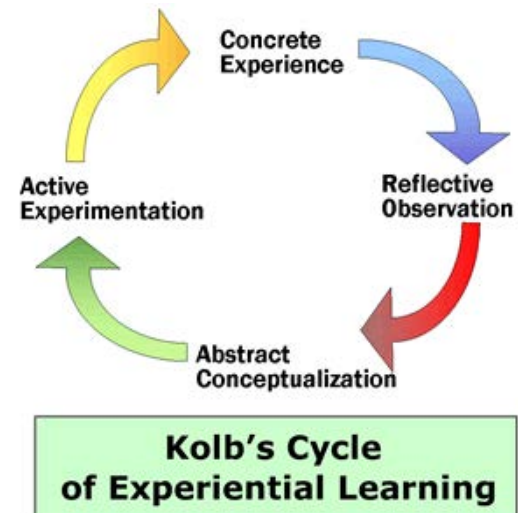
				sterilization <ul style="list-style-type: none"> <li>• Environment cleaning</li> <li>• Equipment Cleaning</li> <li>• Guides on use of disinfectants</li> <li>• Spaulding's principle</li> </ul>	learning through visit	type
V	1		Illustrate on what, when, how, why specimens are collected to optimize the diagnosis for treatment and management.	<b>Specimen Collection (Review)</b> <ul style="list-style-type: none"> <li>• Principle of specimen collection</li> <li>• Types of specimens</li> <li>• Collection techniques and special considerations</li> <li>• Appropriate containers</li> <li>• Transportation of the sample</li> <li>• Staff precautions in handling specimens</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge evaluation- Quiz &amp; Performance assessment - Checklist</li> </ul>
VI	2	2 (E)	Explain on Bio Medical waste management & laundry management	<b>BMW (Bio Medical Waste Management)</b> <i>Laundry management process and infection control and prevention</i> <ul style="list-style-type: none"> <li>• Waste management process and infection prevention</li> <li>• Staff precautions</li> <li>• Laundry management</li> <li>• Country ordinance and BMW National guidelines 2017: Segregation of wastes, Colour coded waste containers, waste collection &amp; storage, Packaging &amp; labeling, Transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Demonstration</li> <li>• Experiential learning through visit</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge assessment by short answers, objective type</li> <li>• Performance assessment</li> </ul>
VII	2		Explain in detail about Antibiotic stewardship, AMR  Describe MRSA/MDRO and its prevention	<b>Antibiotic stewardship</b> <ul style="list-style-type: none"> <li>• Importance of Antibiotic Stewardship</li> <li>• Anti Microbial Resistance</li> <li>• Prevention of MRSA, MDRO in healthcare setting</li> </ul>	Lecture & Discussion <ul style="list-style-type: none"> <li>• Written assignment- Recent AMR guidelines</li> </ul>	Short answers, Objective type <ul style="list-style-type: none"> <li>• Assessment of assignment</li> </ul>

VIII	2	4 (L/E)	Enlist the patient safety indicators followed in a health care organization and the role of nurse in the patient safety audit process	<p><b>Patient Safety Indicators</b></p> <ul style="list-style-type: none"> <li>• Care of Vulnerable patients</li> <li>• Prevention of Iatrogenic injury</li> <li>• Care of lines, drains and tubing's</li> <li>• Restrain policy and care – Physical and Chemical</li> <li>• Blood &amp; blood transfusion policy</li> <li>• Prevention of IV Complication</li> <li>• Prevention of Fall</li> <li>• Prevention of DVT</li> <li>• Shifting and transporting of patients</li> <li>• Surgical safety</li> <li>• Care coordination event related to medication reconciliation and administration</li> <li>• Prevention of communication errors</li> <li>• Prevention of HAI</li> <li>• Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration</li> <li>• Experiential learning</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge assessment</li> <li>• Checklist</li> </ul>
IX	1	1 (E)	Captures and analyzes incidents and events for quality improvement	<p><b>Incidents and adverse Events</b></p> <ul style="list-style-type: none"> <li>• Capturing of incidents</li> <li>• RCA</li> <li>• CAPA</li> <li>• Report writing</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Role-play</li> <li>• Inquiry-Based Learning</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge assessment - short answers, objective type</li> </ul>
X	1		Enumerate IPSG and application of the goals in the patient care settings.	<p><b>IPSG (International Patient safety Goals)</b></p> <ul style="list-style-type: none"> <li>• Identify patient correctly</li> <li>• Improve effective communication</li> <li>• Improve safety of High Alert medication</li> <li>• Ensure safe surgery</li> <li>• Reduce the risk of health care associated infection</li> <li>• Reduce the risk of patient harm resulting from falls</li> <li>• Reduce the harm associated with clinical alarm system</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Role play</li> </ul>	<ul style="list-style-type: none"> <li>• Objective type</li> </ul>

XI	2	3 (L/E)	Enumerate the various safety protocols and its applications	<p><b>Safety protocol</b></p> <ul style="list-style-type: none"> <li>• 5S</li> <li>• Radiation safety</li> <li>• Laser safety</li> <li>• Fire safety <ul style="list-style-type: none"> <li>- Types and classification of fire</li> <li>- Fire alarms</li> <li>- Firefighting equipment</li> </ul> </li> <li>• HAZMAT safety <ul style="list-style-type: none"> <li>- Types of spill</li> <li>- Spillage management</li> <li>- MSDS</li> </ul> </li> <li>• Environmental safety <ul style="list-style-type: none"> <li>- Risk assessment</li> <li>- Aspect impact analysis</li> <li>- Maintenance of Temp and Humidity (Department wise)</li> <li>- Audits</li> </ul> </li> <li>• Emergency Codes</li> <li>• Role of Nurse in times of disaster</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration/ Experiential learning</li> </ul>	<ul style="list-style-type: none"> <li>• Mock drills</li> <li>• Post tests</li> <li>• Checklist</li> </ul>
XII	1		Explain importance of employee safety indicators	<p><b>Employee Safety Indicators</b></p> <ul style="list-style-type: none"> <li>• Vaccination</li> <li>• NSI prevention</li> <li>• Fall prevention</li> <li>• Radiation safety</li> <li>• Annual health check</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge assessment by short answers, objective type</li> </ul>
XIII	1		Identify risk of occupational hazards, prevention and post exposure prophylaxis.	<p><b>Healthcare Worker Immunization Program and management of occupational exposure</b></p> <ul style="list-style-type: none"> <li>• Occupational health ordinance</li> <li>• Vaccination program for healthcare staff</li> <li>• Needle stick injuries and prevention</li> <li>• Post exposure prophylaxis</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture method</li> <li>• Journal review</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> </ul>

**\*Experiential learning:**

Experiential learning is the process by which knowledge is created through the process of experience in the clinical field. Knowledge results from the combination of grasping and transforming experience. (Kolb, 1984). The experiential learning cycle begins with an experience that the student has had, followed by an opportunity to reflect on that experience. Then students may conceptualize and draw conclusions about what they experienced and observed, leading to future actions in which the students experiment with different behaviors. This begins the new cycle as the students have new experiences based on their experimentation. These steps may occur in nearly any order as the learning progresses. As per the need of the learner, the concrete components and conceptual components can be in different order as they may require a variety of cognitive and affective behaviors.



## PHARMACOLOGY I

PLACEMENT

:

III Semesters

**THEORY:** Pharmacology I (III Semester): 1 Credit (20 Hours) - Units I-VIII

**DESCRIPTION:** This course is designed to enable students to acquire understanding of Pharmaco-dynamics, Pharmaco-kinetics, principles of therapeutics & nursing implications.

### COMPETENCIES

On completion of the course, the students will be able to

1. Describe pharmacokinetics and pharmacokinetics
2. Review the principles of drug calculation and administration
3. Explain the commonly used antiseptics and disinfectants
4. Describe the pharmacology of drugs acting on the GI system
5. Describe the pharmacology of drugs acting on the respiratory system
6. Describe drugs used in the treatment of cardiovascular and blood disorders
7. Explain the drugs used in the treatment of endocrine system disorders
8. Describe the drugs acting on skin and drugs used to treat communicable diseases
9. Explain the drugs used in the treatment of ear, nose, throat and eye disorders
10. Explain the drugs used in the treatment of urinary system disorders
11. Describe the drugs used in the treatment of nervous system disorders
12. Explain the drugs used for hormonal replacement and for the pregnant women during antenatal, intra natal and postnatal period
13. Explain the drugs used to treat emergency conditions and immune disorders
14. Discuss the role and responsibilities of nurses towards safe administration of drugs used to treat disorders of various systems with basic understanding of pharmacology
15. Demonstrate understanding about the drugs used in alternative system of medicine

### COURSE OUTLINE

UNIT NO.	TIME (HRS)	LEARNING OUTCOMES	CONTENT	TEACHING LEARNING ACTIVITIES	ASSESSMENT METHODS
I	3	Describe Pharmacodynamics, Pharmacokinetics, Classification, principles of administration of drugs.	<b>Introduction to pharmacology</b> <ul style="list-style-type: none"><li>• Definitions &amp; Branches</li><li>• Nature &amp; Sources of drugs</li><li>• Dosage Forms and Routes of drug administration</li><li>• Terminology used</li><li>• Classification, Abbreviations, Prescription, Drug</li></ul>	<ul style="list-style-type: none"><li>• Lecture cum Discussion</li><li>• Guided reading and written assignment on schedule K drugs</li></ul>	<ul style="list-style-type: none"><li>• Short answer</li><li>• Objective ty</li></ul>

			<p>Calculation, Weights and Measures</p> <ul style="list-style-type: none"> <li>• <i>Pharmacodynamics</i>: Actions, Drug Antagonism, Synergism, Tolerance, Receptors, Therapeutic, adverse, toxic effects, pharmacovigilance</li> <li>• <i>Pharmacokinetics</i>: Absorption, Bioavailability, Distribution, Metabolism, Interaction, Excretion</li> <li>• Review-Principles of drug administration and treatment individualization <ul style="list-style-type: none"> <li>○ Factors affecting dose, route etc</li> </ul> </li> <li>• Indian Pharmacopoeia: Legal Issues, Drug Laws, Schedule Drugs</li> <li>• Rational Use of Drugs</li> <li>• Principles of Therapeutics</li> </ul>		<ul style="list-style-type: none"> <li>• Assessment of assignments</li> </ul>
<b>II</b>	1	Describe antiseptics, and disinfectant & nurse's responsibilities	<p><b>Pharmacology of commonly used antiseptics and disinfectants</b></p> <ul style="list-style-type: none"> <li>• Antiseptics and Disinfectants</li> <li>• Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects, toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>III</b>	2	Describe drugs acting on gastro-intestinal system & nurse's responsibilities	<p><b>Drugs acting on G.I system</b></p> <ul style="list-style-type: none"> <li>• Pharmacology of commonly used drugs <ul style="list-style-type: none"> <li>○ Emetics and Antiemetics</li> <li>○ Laxatives and Purgatives</li> <li>○ Antacids and antipeptic ulcer drugs</li> <li>○ Anti diarrhoeals – Fluid and electrolyte therapy, Furazolidone, dicyclomine</li> </ul> </li> <li>• Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

IV	2	Describe drugs acting on respiratory system & nurse's responsibilities	<b>Drugs acting on respiratory system</b> <ul style="list-style-type: none"> <li>• Pharmacology of commonly used <ul style="list-style-type: none"> <li>○ Antiasthmatics – Bronchodilators (Salbutamol inhalers)</li> <li>○ Decongestants</li> <li>○ Expectorants, Antitussives and Mucolytics</li> <li>○ Broncho-constrictors and Antihistamines</li> </ul> </li> <li>• Composition, action, dosage, route, indications, contraindications, drug Interactions, side effects, adverse effects toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
V	4	Describe drugs used on cardio-vascular system & nurse's responsibilities	<b>Drugs used in treatment of Cardiovascular system and blood disorders</b> <ul style="list-style-type: none"> <li>• Haematinics, &amp; treatment of anemia and antiadrenergics</li> <li>• Cholinergic and anti-cholinergic</li> <li>• Adrenergic Drugs for CHF &amp; vasodilators</li> <li>• Anti anginals</li> <li>• Antiarrhythmics</li> <li>• Antihypertensives</li> <li>• Coagulants &amp; Anticoagulants</li> <li>• Antiplatelets &amp; thrombolytics</li> <li>• Hypolipidemics</li> <li>• Plasma expanders &amp; treatment of shock</li> <li>• Drugs used to treat blood disorders</li> <li>• Composition, action, dosage, route, indications, contraindications, drug Interactions, side effects, adverse effects, toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
VI	2	Describe the drugs used in treatment of endocrine system disorders	<b>Drugs used in treatment of endocrine system disorders</b> <ul style="list-style-type: none"> <li>• Insulin &amp; oral hypoglycemics</li> <li>• Thyroid and anti thyroid drugs</li> <li>• Steroids <ul style="list-style-type: none"> <li>○ Corticosteroids</li> <li>○ Anabolic steroids</li> </ul> </li> <li>• Calcitonin, parathormone, vit. D3, calcium metabolism <ul style="list-style-type: none"> <li>○ Calcium salts</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

VII	1	Describe drugs used in skin diseases & nurse's responsibilities	<b>Drugs used in treatment of integumentary system</b> <ul style="list-style-type: none"> <li>• Antihistaminics and antipruritics</li> <li>• Topical applications for skin- Benzylbenzoate, Gamma BHC, Clotrimazole, Miconazole, Silver Sulphadiazine (burns)</li> <li>• Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
VIII	5	Explain drug therapy/chemotherapy of specific infections & infestations & nurse's responsibilities	<b>Drugs used in treatment of communicable diseases (common infections, infestations)</b> <ul style="list-style-type: none"> <li>• General Principles for use of Antimicrobials</li> <li>• Pharmacology of commonly used drugs: <ul style="list-style-type: none"> <li>○ Penicillin, Cephalosporin's, Aminoglycosides, Macrolide &amp; broad spectrum antibiotics, Sulfonamides, quinolones, Misc. antimicrobials</li> </ul> </li> <li>• Anaerobic infections</li> <li>• Antitubercular drugs,</li> <li>• Anti leprosy drugs</li> <li>• Antimalarials</li> <li>• Antiretroviral drugs</li> <li>• Antiviral agents</li> <li>• Anthelmintics, Anti scabies agents</li> <li>• Antifungal agents</li> <li>• Composition, action, dosage, route, indications, contraindications, Drug Interactions, side effects, adverse effects, toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>

## **ADULT HEALTH NURSING I WITH INTEGRATED PATHOPHYSIOLOGY (including BCLS module)**

**PLACEMENT** : **III SEMESTER**

THEORY-	6 Credits (120 hrs)
PRACTICAL- Lab/Skill lab-	1 Credit (40 hrs)
Clinical-	6 Credits (480 hrs)

**DESCRIPTION:** This course is designed to equip the students to review and apply their knowledge of Anatomy, Physiology, Biochemistry and Behavioral sciences in caring for adult patients with Medical / Surgical disorders using nursing process approach and critical thinking. It also intends to develop competencies required for assessment, diagnosis, treatment, nursing management, and supportive /palliative care to patients with various Medical Surgical disorders.

### **COMPETENCIES**

On completion of Medical Surgical Nursing I course, students will be able to

1. Explain the etiology, pathophysiology, manifestations, diagnostic studies, treatments and complications of common medical and surgical disorders
2. Perform complete health assessment to establish a data base for providing quality patient care and integrate the knowledge of anatomy, physiology and diagnostic tests in the process of data collection
3. Identify diagnoses, list them according to priority and formulate nursing care plan
4. Perform nursing procedures skillfully and apply scientific principles while giving comprehensive nursing care to patients
5. Integrate knowledge of pathology, nutrition and pharmacology in caring for patients experiencing various medical and surgical disorders
6. Identify common diagnostic measures related to the health problems with emphasis on nursing assessment and responsibilities
7. Demonstrate skill in assisting / performing diagnostic and therapeutic procedures
8. Demonstrate competencies/skills to patients undergoing treatment for medical surgical disorders
9. Identify the drugs used in treating patients with medical surgical conditions
10. Plan and give relevant individual and group education on significant medical surgical topics
11. Maintain safe environment for patients and the health care personnel in the hospital
12. Integrate evidence-based information while giving nursing care to patients

## COURSE CONTENT

UNIT	HRS.	LEARNING OUTCOMES	CONTENT	TEACHING LEARNING ACTIVITIES	ASSESSMENT METHODS
I	6 (T) 4 (L/S L)	<p>Narrate the evolution of medical surgical nursing</p> <p>Apply nursing process in caring for patients with medical surgical problems</p> <p>Execute the role of a nurse in various medical surgical setting</p> <p>Develop skills in assessment and care of wound</p> <p>Develop competency in providing pre and postoperative care</p>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Evolution and trends of medical and surgical nursing</li> <li>• International classification of diseases</li> <li>• Roles and responsibility of a nurse in medical and surgical settings               <ul style="list-style-type: none"> <li>○ Outpatient department</li> <li>○ In-patient unit</li> <li>○ Intensive care unit</li> </ul> </li> <li>• Introduction to medical and surgical asepsis               <ul style="list-style-type: none"> <li>○ Inflammation, infection</li> <li>○ Wound healing – stages, influencing factors</li> <li>○ Wound care and dressing technique</li> </ul> </li> <li>• Care of surgical patient               <ul style="list-style-type: none"> <li>○ pre-operative</li> <li>○ post-operative</li> </ul> </li> <li>• Alternative therapies used in caring for patients with Medical Surgical Disorders</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum discussion</li> <li>• Demonstration &amp; Practice session</li> <li>• Role play</li> <li>• Visit to outpatient department, in patient and intensive care unit</li> </ul>	<ul style="list-style-type: none"> <li>• OSCE</li> </ul>
II	11 (T) 4 (L/S L)	<p>Explain organizational set up of the operating theatre</p> <p>Differentiate the role of scrub nurse and circulating nurse</p> <p>Describe the different positioning for various surgeries</p> <p>Apply principles of asepsis in handling the sterile equipment</p>	<p><b>Intraoperative Care</b></p> <ul style="list-style-type: none"> <li>• Organization and physical set up of the operation theatre               <ul style="list-style-type: none"> <li>○ Classification</li> <li>○ O.T Design</li> <li>○ Staffing</li> <li>○ Members of the OT team</li> <li>○ Duties and responsibilities of the nurse in OT</li> </ul> </li> <li>• Position and draping for common surgical procedures</li> <li>• Instruments, sutures and suture materials, equipment for common surgical procedures</li> <li>• Disinfection and sterilization of equipment</li> <li>• Preparation of sets for</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Demonstration, Practice session, and Case Discussion</li> <li>• Visit to receiving bay</li> </ul>	<ul style="list-style-type: none"> <li>• Caring for patient intra operatively</li> <li>• Submit a list of disinfectants used for instruments with the action and precaution</li> </ul>

		<p>Demonstrate skill in scrubbing procedures</p> <p>Demonstrate skill in assessing the patient and document accurately the surgical safety checklist</p> <p>Develop skill in assisting with selected surgeries</p> <p>Explain the types, functions, and nursing considerations for different types of anaesthesia</p>	<p>common surgical procedures</p> <ul style="list-style-type: none"> <li>• Scrubbing procedures – Gowning, masking and gloving</li> <li>• Monitoring the patient during the procedures</li> <li>• Maintenance of the therapeutic environment in OT</li> <li>• Assisting in major and minor operation, handling specimen</li> <li>• Prevention of accidents and hazards in OT</li> <li>• Anaesthesia- types, methods of administration, effects and stages, equipment &amp; drugs</li> <li>• Legal aspects</li> </ul>		
<b>III</b>	6 (T) 4 (L/S L)	<p>Identify the signs and symptoms of shock and electrolyte imbalances</p> <p>Develop skills in managing fluid and electrolyte imbalances</p> <p>Perform pain assessment and plans for the nursing management</p>	<p><b>Nursing care of patients with common signs and symptoms and management</b></p> <ul style="list-style-type: none"> <li>• Fluid and electrolyte imbalance</li> <li>• Shock</li> <li>• Pain</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture, discussion, demonstration</li> <li>• Case discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• MCQ</li> <li>• Case report</li> </ul>
<b>IV</b>	16 (T) 4 (L)	<p>Demonstrate skill in respiratory assessment</p> <p>Differentiates different breath sounds and lists the indications</p> <p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of common respiratory problems</p> <p>Describe the health behaviour to be adopted in preventing respiratory illnesses</p>	<p><b>Nursing Management of patients with respiratory problems</b></p> <ul style="list-style-type: none"> <li>• Review of anatomy and physiology of respiratory system</li> <li>• Nursing Assessment – history taking, physical assessment and diagnostic tests</li> <li>• Common respiratory problems: <ul style="list-style-type: none"> <li>○ Upper respiratory tract infections</li> <li>○ Chronic obstructive pulmonary diseases</li> <li>○ Pleural effusion, Empyema</li> <li>○ Bronchiectasis</li> <li>○ Pneumonia</li> <li>○ Lung abscess</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Lecture, discussion,</li> <li>• Demonstration</li> <li>• Practice session</li> <li>• Case presentation</li> <li>• Visit to PFT Lab</li> </ul>	<ul style="list-style-type: none"> <li>• Essay</li> <li>• Short Answer</li> <li>• OSCE</li> </ul>

			<ul style="list-style-type: none"> <li>○ Cyst and tumors</li> <li>○ Chest Injuries</li> <li>○ Acute respiratory distress syndrome</li> <li>○ Pulmonary embolism</li> <li>● Health behaviours to prevent respiratory illness</li> </ul>		
V	15 (T) 5 (L)	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of gastrointestinal disorders</p> <p>Demonstrate skill in gastrointestinal assessment</p> <p>Prepare patient for upper and lower gastrointestinal investigations</p> <p>Demonstrate skill in gastric decompression, gavage, and stoma care</p> <p>Demonstrate skill in different feeding techniques</p>	<p><b>Nursing Management of patients with disorders of digestive system</b></p> <ul style="list-style-type: none"> <li>● Review of anatomy and physiology of GI system</li> <li>● Nursing assessment – History and physical assessment</li> <li>● GI investigations</li> <li>● Common GI disorders: <ul style="list-style-type: none"> <li>○ Oral cavity-lips, gums and teeth</li> <li>○ GI - Bleeding, Infections, Inflammation, tumors, Obstruction, Perforation &amp; Peritonitis</li> <li>○ Peptic &amp; duodenal ulcer,</li> <li>○ Mal-absorption, Appendicitis, Hernias</li> <li>○ Hemorrhoids, fissures, Fistulas</li> <li>○ Pancreas- inflammation, cysts, and tumors</li> <li>○ Liver-inflammation, cysts, abscess, cirrhosis, portal hypertension, hepatic failure, tumors</li> <li>○ Gall bladder-inflammation, Cholelithiasis, tumors</li> </ul> </li> <li>● Gastric decompression, gavage and stoma care, different feeding techniques</li> <li>● Alternative therapies, drugs used in treatment of disorders of digestive system</li> </ul>	<ul style="list-style-type: none"> <li>● Lecture, Discussion</li> <li>● Demonstration,</li> <li>● Role play</li> <li>● Problem Based Learning</li> <li>● Visit to stoma clinic</li> </ul>	<ul style="list-style-type: none"> <li>● Quiz</li> <li>● OSCE</li> </ul>
VI	15 (T) 5 (L)	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing</p>	<p><b>Nursing Management of patients with cardiovascular problems</b></p> <ul style="list-style-type: none"> <li>● Review of anatomy and physiology of cardio-</li> </ul>	<ul style="list-style-type: none"> <li>● Lecture, discussion</li> <li>● Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>● Care plan</li> <li>● Drug record</li> </ul>

<p><b>VII</b></p>	<p>7 (T) 3 (L)</p>	<p>management of cardiovascular disorders</p> <p>Demonstrate skill in cardiovascular assessment</p> <p>Prepare patient for invasive and non-invasive cardiac procedures</p> <p>Demonstrate skill in monitoring and interpreting clinical signs related to cardiac disorders</p> <p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of hematological disorders</p> <p>Interpret blood reports</p> <p>Prepare and provides health education on blood donation</p>	<p>vascular system</p> <ul style="list-style-type: none"> <li>• Nursing Assessment-History and Physical assessment</li> <li>• Disorders of vascular system-Hypertension, arteriosclerosis, Raynaud’s disease, aneurysm and peripheral vascular disorders</li> <li>• Coronary artery diseases--coronary atherosclerosis, Angina pectoris, myocardial infarction</li> <li>• Valvular disorders - congenital and acquired</li> <li>• Rheumatic heart disease - pericarditis, myocarditis, endocarditis, cardiomyopathies</li> <li>• Cardiac dysrrhythmias, heart block</li> <li>• Congestive heart failure, cor-pulmonale, pulmonary edema, cardiogenic shock, cardiac tamponade</li> <li>• Cardiopulmonary arrest</li> </ul> <p><b>Nursing Management of patients with disorders of blood</b></p> <ul style="list-style-type: none"> <li>• Review of Anatomy and Physiology of blood, nursing assessment- history, physical assessment &amp; Diagnostic tests</li> <li>• Anemia, Polycythemia</li> <li>• Bleeding Disorders – clotting factor defects and platelets defects, thalassemia, leukemias, leukopenias, agranulocytosis</li> <li>• Lymphomas, myelomas</li> </ul>	<ul style="list-style-type: none"> <li>• Practice session</li> <li>• Case Discussion</li> <li>• Health education</li> <li>• Drug Book/ presentation</li> </ul> <p><b>• BCLS Module</b></p> <ul style="list-style-type: none"> <li>• Field visit to blood bank</li> <li>• Counseling</li> </ul>	<p>BLS/BCLS evaluation</p> <ul style="list-style-type: none"> <li>• Interpretati on of blood reports</li> <li>• Visit report</li> </ul>
<p><b>VIII</b></p>	<p>8 (T) 2 (L)</p>	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of</p>	<p><b>Nursing management of patients with disorders of endocrine system</b></p> <ul style="list-style-type: none"> <li>• Review of anatomy and physiology of endocrine system</li> <li>• Nursing Assessment –</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture, discussion, demonstration</li> <li>• Practice session</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare health education on self-administrat</li> </ul>

		<p>endocrine disorders</p> <p>Demonstrate skill in assessment of endocrine organ dysfunction</p> <p>Prepare and provides health education on diabetic diet</p> <p>Demonstrate skill in insulin administration</p>	<p>History and Physical assessment</p> <ul style="list-style-type: none"> <li>Disorders of thyroid and Parathyroid, Adrenal and Pituitary (Hyper, Hypo, tumors)</li> <li>Diabetes mellitus</li> </ul>	<ul style="list-style-type: none"> <li>Case Discussion</li> <li>Health education</li> </ul>	<p>ion of insulin</p> <ul style="list-style-type: none"> <li>Submits a diabetic diet plan</li> </ul>
<b>IX</b>	8 (T) 2 (L)	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of disorders of integumentary system</p> <p>Demonstrate skill in integumentary assessment</p> <p>Demonstrate skill in medicated bath</p> <p>Prepare and provide health education on skin care</p>	<p><b>Nursing management of patients with disorders of Integumentary system</b></p> <ul style="list-style-type: none"> <li>Review of anatomy and physiology of skin</li> <li>Nursing Assessment – History and Physical assessment</li> <li>Infection and infestations; Dermatitis</li> <li>Dermatoses; infectious and Non infectious</li> <li>Acne, Allergies, Eczema &amp; Pemphigus</li> <li>Psoriasis, Malignant melanoma, Alopecia</li> <li>Special therapies, alternative therapies</li> <li>Drugs used in treatment of disorders of integumentary system</li> </ul>	<ul style="list-style-type: none"> <li>Lecture, discussion</li> <li>Demonstration</li> <li>Practice session</li> <li>Case Discussion</li> </ul>	<ul style="list-style-type: none"> <li>Drug report</li> <li>Preparation of Home care plan</li> </ul>
<b>X</b>	11 (T) 4 (L)	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of musculoskeletal disorders</p> <p>Demonstrate skill in musculoskeletal assessment</p> <p>Prepare patient for radiological and non-radiological</p>	<p><b>Nursing management of patients with musculoskeletal problems</b></p> <ul style="list-style-type: none"> <li>Review of Anatomy and physiology of the musculoskeletal system</li> <li>Nursing Assessment- History and physical assessment, diagnostic tests</li> <li>Musculoskeletal trauma: Dislocation, fracture, sprain, strain, contusion, amputation</li> <li>Musculoskeletal infections and tumors: Osteomyelitis, benign and malignant tumour</li> <li>Orthopedic modalities: Cast,</li> </ul>	<ul style="list-style-type: none"> <li>Lecture / Discussion</li> <li>Demonstration</li> <li>Case Discussion</li> <li>Health education</li> </ul>	<ul style="list-style-type: none"> <li>Nursing care plan</li> <li>Prepare health teaching on care of patient with cast</li> </ul>

		<p>investigations of musculoskeletal system</p> <p>Demonstrate skill in crutch walking and splinting</p> <p>Demonstrate skill in care of patient with replacement surgeries</p> <p>Prepare and provide health education on bone healing</p>	<p>splint, traction, crutch walking</p> <ul style="list-style-type: none"> <li>• Musculoskeletal inflammation: Bursitis, synovitis, arthritis</li> <li>• Special therapies, alternative therapies</li> <li>• Metabolic bone disorder: Osteoporosis, osteomalacia and Paget’s disease</li> <li>• Spinal column defects and deformities – tumor, prolapsed intervertebral disc, Pott’s spine</li> <li>• Rehabilitation, prosthesis</li> <li>• Replacement surgeries</li> </ul>		
<b>XI</b>	17 (T) 3 (L)	<p>Explain the etiology, pathophysiology, clinical manifestations, diagnostic tests, and medical, surgical, nutritional, and nursing management of patients with communicable diseases</p> <p>Demonstrate skill in barrier and reverse barrier techniques</p> <p>Demonstrate skill in execution of different isolation protocols</p>	<p><b>Nursing management of patients with Communicable diseases</b></p> <ul style="list-style-type: none"> <li>• Overview of infectious diseases, the infectious process</li> <li>• Nursing Assessment – History and Physical assessment, Diagnostic tests</li> <li>• Tuberculosis</li> <li>• Diarrhoeal diseases, hepatitis A-E, Typhoid</li> <li>• Herpes, Chickenpox, Smallpox, Measles, Mumps, Influenza</li> <li>• Meningitis</li> <li>• Gas gangrene</li> <li>• Leprosy</li> <li>• Dengue, Plague, Malaria, Chikungunya, swine flu, Filariasis</li> <li>• Diphtheria, Pertussis, Tetanus, Poliomyelitis</li> <li>• Special infection control measures: Notification, Isolation, Quarantine, Immunization,</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture, discussion, demonstration</li> <li>• Practice session</li> <li>• Case Discussion / seminar</li> <li>• Health education</li> <li>• Drug Book/ presentation</li> </ul> <p><b>Refer TB control &amp; Management module</b></p>	<ul style="list-style-type: none"> <li>• Prepares and submits protocol on various isolation techniques</li> <li>•</li> </ul>

## CLINICAL PRACTICUM

**CLINICAL PRACTICUM : 6 Credits (480 Hrs) - 18 weeks x 27 hrs**

### PRACTICE COMPETENCIES

On completion of the clinical practicum, the students will be able to apply nursing process and critical thinking in delivering holistic nursing care including rehabilitation to the adult patients undergoing surgery, with shock and fluid and electrolyte imbalance and with selected medical & surgical conditions i.e., Gastrointestinal, Respiratory, Endocrine, Orthopedic, Dermatology and Cardiovascular disorders.

The students will be competent to:

1. Utilize the nursing process in providing care to the sick adults in the hospital
  - a. Perform complete health assessment to establish a data base for providing quality patient care
  - b. Integrate the knowledge of diagnostic tests in the process of data collection
  - c. Identify nursing diagnoses and list them according to priority
  - d. Formulate nursing care plan, using problem solving approach
  - e. Apply scientific principles while giving nursing care to patients
  - f. Perform nursing procedures skillfully on patients
  - g. Establish /develop interpersonal relationship with patients and family members
  - h. Evaluate the expected outcomes and modify the plan according to the patient needs
2. Provide comfort and safety to adult patients in the hospital
3. Maintain safe environment for patients during hospitalization
4. Explain nursing actions appropriately to the patients and family members
5. Ensure patient safety while providing nursing procedures
6. Assess the educational needs of the patient and their family related to medical and surgical disorders and provide appropriate health education to patients
7. Provide pre, intra and post-operative care to patients undergoing surgery
8. Integrate knowledge of pathology, nutrition and pharmacology for patients experiencing various medical and surgical disorders
9. Integrate evidence-based information while giving nursing care to patients
10. Demonstrate the awareness of legal and ethical issues in nursing practice

## I. NURSING MANAGEMENT OF PATIENTS WITH MEDICAL CONDITIONS

### A. Skill Lab

#### Use of manikins and simulators

- Intravenous therapy
- Oxygen through mask
- Oxygen through nasal prongs
- Venturi mask
- Nebulization
- Chest physiotherapy

### B. Clinical Postings

Clinical area/unit	Duration in weeks	Learning Outcomes	Procedural competencies/Clinical skills	Clinical Requirements	Assessment methods
General medical	4	<p>Develop skill in intravenous injection administration and IV therapy</p> <p>Assist with diagnostic procedures</p> <p>Develop skill in the Management of patients with Respiratory problems</p> <p>Develop skill in managing patients with metabolic abnormality</p>	<ul style="list-style-type: none"> <li>• Intravenous therapy               <ul style="list-style-type: none"> <li>○ IV cannulation</li> <li>○ IV maintenance and monitoring</li> <li>○ Administration of IV medication</li> </ul> </li> <li>• Care of patient with Central line</li> <li>• Preparation and assisting and monitoring of patients undergoing diagnostic procedures such as thoracentesis, Abdominal paracentesis</li> </ul> <p><i>Management patients with respiratory problems</i></p> <ul style="list-style-type: none"> <li>• Administration of oxygen through mask, nasal prongs, venturi mask</li> <li>• Pulse oximetry</li> <li>• Nebulization</li> <li>• Chest physiotherapy</li> <li>• Postural drainage</li> <li>• Oropharyngeal suctioning</li> <li>• Care of patient with chest drainage</li> </ul> <ul style="list-style-type: none"> <li>• Diet Planning               <ul style="list-style-type: none"> <li>○ High Protein diet</li> <li>○ Diabetic diet</li> </ul> </li> <li>• Insulin administration</li> <li>• Monitoring GRBS</li> </ul>	<ul style="list-style-type: none"> <li>• Care Study – 1</li> <li>• Health education</li> <li>• Clinical presentation / Care note) - 1</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical evaluation</li> <li>• OSCE</li> <li>• Care Study evaluation</li> <li>• Care Note/ Clinical presentation</li> </ul>

## II. NURSING MANAGEMENT OF PATIENTS WITH SURGICAL CONDITIONS

### A. Skill Lab

#### Use of manikins and simulators

- Nasogastric aspiration
- Surgical dressing
- Suture removal
- Colostomy care / ileostomy care
- Enteral feeding

### B. Clinical postings

<b>Clinical area/unit</b>	<b>Duration in weeks</b>	<b>Learning Outcomes</b>	<b>Procedural competencies/Clinical skills</b>	<b>Clinical Requirements</b>	<b>Assessment methods</b>
General surgical wards	4	<p>Develop skill in caring for patients during pre and post-operative period</p> <p>Assist with diagnostic procedures</p> <p>Develop skill in managing patient with Gastro-intestinal Problems</p> <p>Develop skill in wound management</p>	<ul style="list-style-type: none"> <li>• Pre-Operative care</li> <li>• Immediate Post-operative care</li> <li>• Post-operative exercise</li> <li>• Pain assessment</li> <li>• Pain Management</li> <li>• Assisting diagnostic procedure and after care of patients undergoing               <ul style="list-style-type: none"> <li>○ Colonoscopy</li> <li>○ ERCP</li> <li>○ Endoscopy</li> <li>○ Liver Biopsy</li> </ul> </li> <li>• Nasogastric aspiration</li> <li>• Gastrostomy / Jejunostomy feeds</li> <li>• Ileostomy / Colostomy care</li> <li>• Surgical dressing</li> <li>• Suture removal</li> <li>• Surgical soak</li> <li>• Sitz bath</li> <li>• Care of drain</li> </ul>	<ul style="list-style-type: none"> <li>• Care study – 1,</li> <li>• Care Note – 1               <ul style="list-style-type: none"> <li>• Health teaching</li> <li>• Clinical Presentation / Care note) - 1</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Clinical evaluation, OSCE</li> <li>• Care study</li> <li>• Care note/ Clinical presentation</li> </ul>

### III. NURSING MANAGEMENT OF PATIENTS WITH CARDIAC CONDITIONS

#### A. Skill Lab

##### Use of manikins and simulators

- Cardiovascular assessment
- Interpreting ECG
- CPR
- ABG analysis
- Taking blood sample
- Arterial blood gas analysis – interpretation

#### B. Clinical postings

<b>Clinical area/unit</b>	<b>Duration in weeks</b>	<b>Learning Outcomes</b>	<b>Procedural competencies/Clinical skills</b>	<b>Clinical Requirements</b>	<b>Assessment methods</b>
Cardiology wards	2	<p>Develop skill in Management of patients with cardiac problems</p> <p>Develop skill in management of patients with disorders of Blood</p>	<ul style="list-style-type: none"> <li>• Cardiac monitoring</li> <li>• Recording and interpreting ECG</li> <li>• Arterial blood gas analysis – interpretation</li> <li>• Administer cardiac drugs</li> <li>• Preparation and after care of patients for cardiac catheterization</li> <li>• CPR</li> <li>• Collection of blood sample for</li> <li>• Blood grouping/cross matching</li> <li>• Blood sugar</li> <li>• Serum electrolytes</li> <li>• Assisting with blood transfusion</li> <li>• Assisting for bone marrow aspiration</li> <li>• Application of antiembolism stockings (TED hose)</li> <li>• Application / maintenance of sequential Compression device</li> </ul>	<ul style="list-style-type: none"> <li>• Cardiac assessment – 1</li> <li>• Drug presentation - 1</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical evaluation</li> <li>• Drug presentation</li> </ul>

#### IV. NURSING MANAGEMENT OF PATIENTS WITH DISORDERS OF INTEGUMENTARY SYSTEM

##### A. Skill Lab

##### Use of manikins and simulators

Application of topical medication

##### B. Clinical postings

Clinical area/unit	Duration in weeks	Learning Outcomes	Procedural competencies/Clinical skills	Clinical Requirements	Assessment methods
Dermatology wards	1	Develop skill in management of patients with disorders of Integumentary system	<ul style="list-style-type: none"> <li>• Intradermal injection- Skin allergy testing</li> <li>• Application of topical medication</li> <li>• Medicated bath</li> </ul>		<ul style="list-style-type: none"> <li>• Clinical evaluation</li> </ul>

#### V. NURSING MANAGEMENT OF PATIENTS WITH COMMUNICABLE DISEASES

##### A. Skill Lab

- Barrier Nursing
- Reverse Barrier Nursing
- Standard precautions

##### B. Clinical postings

Clinical area/unit	Duration in weeks	Learning Outcomes	Procedural competencies/Clinical skills	Clinical Requirements	Assessment methods
Isolation ward	1	Develop skill in the management of patients requiring isolation	<ul style="list-style-type: none"> <li>• Barrier Nursing</li> <li>• Reverse barrier nursing</li> <li>• Standard precautions (Universal precaution)</li> <li>Use of PPE, needle stick and sharp injury prevention, Cleaning and disinfection, Respiratory hygiene, waste disposal and safe injection practices)</li> </ul>	<ul style="list-style-type: none"> <li>• Care Note – 1</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical evaluation</li> <li>• Care note</li> </ul>

## VI. NURSING MANAGEMENT OF PATIENTS WITH MUSCULOSKELETAL PROBLEMS

### A. Skill Lab

#### Use of manikins and simulators

- Range of motion exercises
- Muscle strengthening exercises
- Crutch walking

### B. Clinical postings

Clinical area/unit	Duration in weeks	Learning Outcomes	Procedural competencies/Clinical skills	Clinical Requirements	Assessment methods
Orthopedic wards	2	Develop skill in management of patients with musculoskeletal problems	<ul style="list-style-type: none"> <li>• Preparation of patient with Myelogram / CT / MRI</li> <li>• Assisting with application &amp; removal of POP / Cast</li> <li>• Preparation, assisting and after care of patient with Skin traction / skeletal traction</li> <li>• Care of orthotics</li> <li>• Muscle strengthening exercises</li> <li>• Crutch walking</li> <li>• Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Care Note – 1</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical evaluation,</li> <li>• Care note</li> </ul>

## VII. NURSING MANAGEMENT OF PATIENTS IN THE OPERATING ROOMS

### A. Skill Lab

#### Use of manikins and simulators

- Scrubbing, gowning and gloving
- Orient to instruments for common surgeries
- Orient to suture materials
- Positioning

## **B. Clinical postings**

<b>Clinical area/unit</b>	<b>Duration in weeks</b>	<b>Learning Outcomes</b>	<b>Procedural competencies/Clinical skills</b>	<b>Clinical Requirements</b>	<b>Assessment methods</b>
Operation theatre	4	Develop skill in caring for intraoperative patients	<ul style="list-style-type: none"> <li>• Position and draping</li> <li>• Preparation of operation table</li> <li>• Set up of trolley with instrument</li> <li>• Assisting in major and minor operation</li> <li>• Disinfection and sterilization of equipment</li> <li>• Scrubbing procedures – Gowning, masking and gloving</li> <li>• Intra operative monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Assist as circulatory nurse - 5</li> <li>• Positioning &amp; draping - 5</li> <li>• Assist as scrub nurse in major surgeries - 5</li> <li>• Assist as scrub nurse in minor surgeries – 5</li> </ul>	Clinical evaluation, OSCE

## PHARMACOLOGY II

PLACEMENT-IV Semester

Theory: 2 Credits (40 Hours)

<b>IX</b>	4	Describe drugs used in disorders of ear, nose, throat and eye and nurses' responsibilities	<p><b>Drugs used in disorders of ear, nose, throat &amp; Eye</b></p> <ul style="list-style-type: none"> <li>• Antihistaminics</li> <li>• Topical applications for eye (Chloromphenicol, Gentamycin eye drops), ear (Soda glycerine, boric spirit ear drops), nose and buccal cavity-chlorhexidine mouthwash</li> <li>• Composition, action, dosage, route, indications, contraindications, drug Interactions, side effects, adverse effects, toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>X</b>	4	Describe drugs acting on urinary system & nurse's responsibilities	<p><b>Drugs used on urinary system</b></p> <ul style="list-style-type: none"> <li>• Pharmacology of commonly used drugs                             <ul style="list-style-type: none"> <li>○ Renin angiotensin system</li> <li>○ Diuretics and antidiuretics</li> <li>○ Drugs toxic to kidney</li> <li>○ Urinary antiseptics</li> <li>○ Treatment of UTI – acidifiers and alkalinizers</li> </ul> </li> <li>• Composition, action, dosage, route, indications, contraindications, Drug Interactions, side effects, adverse effects toxicity and role of nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>
<b>XI</b>	10	Describe drugs used on nervous system & nurse's responsibilities	<p><b>Drugs acting on nervous system</b></p> <ul style="list-style-type: none"> <li>• Basis &amp; applied pharmacology of commonly used drugs</li> <li>• Analgesics and anaesthetics                             <ul style="list-style-type: none"> <li>○ Analgesics- Non steroidal anti-inflammatory(NSAID)drugs</li> <li>○ Antipyretics</li> <li>○ Opioids &amp; other central analgesics</li> </ul> </li> <li>✓ General (techniques of GA, pre anesthetic medication) &amp; local anesthetics</li> <li>✓ Gases: oxygen, nitrous, oxide, carbon-dioxide &amp; others</li> <li>• Hypnotics and sedatives</li> <li>• Skeletal muscle relaxants</li> <li>• Anti psychotics</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Drug study/ presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Short answer</li> <li>• Objective type</li> </ul>