FELLOWSHIP IN INFECTION PREVENTION AND CONTROL NURSING

ABOUT THE COURSE:

Malla Reddy School of Nursing Science and Technology recognizes the critical need to empower registered nurses with the knowledge and skills essential for infection prevention and control practices across healthcare settings. With emerging diseases and hospital-acquired infections posing serious threats, trained nurses serve as the front line in safeguarding patient safety and ensuring high standards of hygiene and infection prevention.

This Fellowship program is designed to equip nurses with a deep understanding of infection transmission, sterilization, disinfection, epidemiological surveillance, outbreak management, and strategies to promote community and hospital infection prevention. It enhances the nurses ability to implement protocols, conduct infection audits, and participate in quality improvement and research related to infection control.

OBJECTIVES:

Graduates of this fellowship program will be able to:

- Implement and supervise infection control protocols in healthcare settings.
- Conduct surveillance and epidemiological tracking of infections.
- Educate patients, staff and community members on infection prevention.
- Promote standard precautions and safety practices to minimize healthcare-associated infections (HAIs).
- Collaborate with interdisciplinary teams for effective infection control strategies.
- Conduct audits and participate in infection-related research and quality improvement initiatives.

ELIGIBILITY: Registered B.Sc. Nursing in India or equivalent.

DURATION: 52 Weeks / One Academic Year

COURSE DESCRIPTION:

This course is structured to provide registered B.Sc (N) with comprehensive and specialized knowledge in infection control and preventive nursing, both in hospital and community health settings.

EVALUATION:

Examination will be conducted by the School of Nursing Science and Technology, Malla Reddy Vishwavidyapeeth (Deemed to be University).

CRITERIA TO APPEAR FOR EXAM:

- 80% attendance in theory
- 100% attendance in practical

CRITERIA TO PASS:

- In order to pass a candidate should obtain 50% in theory and 50% in practical separately
- A candidate should get 50% in internal assessment.

AWARD OF CERTIFICATE:

Certificate will be awarded by Malla Reddy Vishwavidyapeeth (Deemed to be University).

S.No	COURSE CODE	SUBJECTS	THEORY	LAB	CLINICAL	TOTAL
1		Basic Nursing for Infection Prevention & control **(No Exam)**	60	20	120	200
2		Infection Prevention & control Nursing -I	80	20	300	400
3		Infection Prevention & control Nursing – II	80	20	300	400

BASIC NURSING FOR INFECTION PREVENTION AND CONTROL

Theory: 60 hours
Lab: 20 hours
Practical: 120 hours

Unit	Hours	Learning objectives	Content	Teaching Learning Activity	Assessment Methods
I	20	Understand applied anatomy & physiology to support clinical judgment and nursing care.	**Applied Anatomy & Physiology** ➢ Review ● Cell structure and physiology ✓ Normal cell ✓ Malignant cell ● Neurological system ● Respiratory system ● Blood and lymphatics ● Cardiovascular system ● Gastro intestinal system ● Endocrine system ● Musculoskeletal system ● Genitourinary system ● Reproductive system ● Sensory system Documentation and Instruction to be taken while taking opioids ● Nurses role while administering opioids and observing the client for side-effects	- Lectures - Diagrams/Models - Case-based learning - Video sessions	- Written exam - Viva - Case scenario-based assessments
Unit II	10	Understand pharmacological principles and safe medication practices.	**Pharmacology** ➢ Review ● Pharmacokinetics ● Analgesics ● Sedatives and Narcotics ● Antibiotics, antiseptics ● Drug reaction & toxicity ● Drugs used in cancer chemotherapy ● Blood and blood components Principles of drug administration, role of nurse and care of drugs	- Demonstration - Drug calculation exercises - Simulation practice	- OSCE - MCQ test - Drug card presentation
Unit	10	Provide	**Psychosocial and Family Support**	- Group	- Reflective

III		psychosocial and emotional support to patients and families.	• Communication with patients and families • Stress management for patients and caregivers • End-of-life care and decision-making • Grief, loss, and palliative approach	discussions - Role play - Counseling simulation	journal - Group presentation - Case study analysis
Unit IV	10	Apply infection prevention and control practices in clinical settings.	**Basic Assessment of the Infection Prevention & Control Nursing** • Hand Hygiene Practices • Use of Personal Protective Equipment (PPE) • Aseptic Technique • Infection Risk Identification • Environmental Cleaning & Waste Disposal • Antimicrobial Stewardship Awareness • Staff & Patient Education	- Hands-on demonstration - Clinical simulation - Interactive workshops	- Practical skill checklist - Logbook - Infection control
Unit V	10	Demonstrate effective communication and build interpersonal relationships in healthcare.	**Communication skills and IPR** ● Process and methods ● Establishing and maintaining good IPR & communication with family, staff and colleagues ● Multidisciplinary team and role of nurse ● Breaking bad news ● Guidance and counseling	- Role playing - Peer feedback sessions - Scenario-based practice	- Observation checklist - Peer review - Role play evaluation

INFECTION PREVENTION AND CONTROL NURSING – I

Theory: 80 hours
Lab: 20 Hours
Practical: 300 hours

Unit	Hours	Learning objectives	Content	Teaching Learning Activity	Assessment Methods
Unit - I	10	Understand microbiology fundamentals and infection pathways.	**Introduction to Infection Control & Microbiology Basics** • Types of microorganisms (bacteria, viruses, fungi, parasites) • Chain of infection (reservoir, transmission, entry) • Infectious disease vs colonization	- Interactive lecture - Microbe ID charts - Group quiz	- MCQ test - Oral Q&A - Group quiz
Unit - II	20	Apply standard precautions and perform proper hand hygiene.	**Standard Precautions & Hand Hygiene** • Standard precautions (PPE, hand hygiene, cough etiquette) • 5 Moments of Hand Hygiene • Alcohol-based rub vs soap and water	- Hands-on demonstration - Hand hygiene audit - Video tutorials	- Skill checklist - Peer audit report - Practical exam
Unit - III	10	Implement transmission-based precautions and manage isolation.	**Transmission-Based Precautions** • Contact, droplet, airborne precautions • Isolation room setup and signage • Nursing care in isolation	- Simulation of isolation room - Role play - Poster creation	- OSCE - Scenario-based evaluation - Poster presentation
Unit IV	10	Prevent and manage common healthcare-associated infections (HAIs).	**Healthcare-Associated Infections (HAIs)** • CAUTI, CLABSI, VAP, surgical site infections • Aseptic technique • HAI prevention bundles	- Skill stations - Use of checklists - Clinical case discussion	- Practical exam - Logbook entry - Written test

Unit V	10	Understand environmental cleaning protocols and disinfection processes.	**Environmental Cleaning & Equipment Disinfection** • High-touch surfaces • Reusable vs disposable equipment • Disinfection levels (low, intermediate, high)	- Demonstration using cleaning kits - Facility rounds - Case scenarios	- Observation checklist - Viva voce - Written quiz
Unit VI	10	Recognize the importance of antimicrobial stewardship and prevent MDROs.	**Antibiotic Stewardship & Multidrug-Resistant Organisms (MDROs)** • Rational antibiotic use • MDRO prevention (MRSA, CRE) • Reporting and surveillance	- Antibiotic audit activity - Seminar by microbiologist - Group discussion	- Case-based MCQs - Audit report - Reflective assignment
Unit VII	10	Educate patients and families about infection prevention strategies.	**Patient & Family Education in Infection Prevention** • Hand hygiene and respiratory etiquette education • Safe discharge practices • Cultural considerations in infection control	- Role play - Brochure development - Education session with mock patients	- Patient education material evaluation - Peer feedback - Objective checklist

INFECTION PREVENTION AND CONTROL NURSING – II

Theory: 80 hours
Lab: 20 Hours
Practical: 300 hours

Unit	Hours	Learning objectives	Content	Teaching Learning Activity	Assessment Methods
Unit-I	10	Apply infection control measures in specialized and high-risk units.	**Infection Control in Specialized Units** • Infection control in ICU, NICU, and OR • Aseptic techniques in high-risk areas • Role of nursing in critical care infection prevention	- Case-based learning - Video demonstrations - Simulation in ICU/OR setup	- OSCE - Scenario analysis - Skills checklist
Unit-II	10	Manage outbreaks effectively using surveillance data.	**Outbreak Management and Surveillance** • Identifying and managing outbreaks in healthcare settings • Surveillance systems and reporting • Contact tracing and containment strategies	- Tabletop simulations - Surveillance drills - Group discussion	- Group presentation - Surveillance plan creation - Written test
Unit - III	10	Promote and manage immunization practices among healthcare providers.	**Immunization in Healthcare Settings** • Importance of vaccination for healthcare workers • Immunization schedules and recommendations • Managing vaccine-preventable diseases in healthcare facilities	- Guest lecture by immunologist - Schedule mapping activity - Group discussions	- Quiz - Immunization plan assignment - Case-based questions
Unit-IV	5	Ensure infection prevention during and after medical	**Infection Control During Medical Procedures** • Infection control in invasive procedures (e.g., catheter	- Sterile technique demo - Simulation lab	- Skills test - Practical evaluation - Logbook

		procedures	insertion, surgeries) • Sterile technique and surgical site infection prevention • Post-procedure infection prevention strategies	- Visual checklist review	entry
Unit-V	5	Support antimicrobial stewardship to reduce resistance.	**Antimicrobial Stewardship Programs** • Principles of antimicrobial stewardship • Role of the nurse in promoting appropriate antibiotic use • Preventing antimicrobial resistance in healthcare settings	- Case study analysis - Drug chart review - Role-play consultations	- MCQ - Audit report - Reflective log
Unit-VI	10	Address infection control challenges in long-term care facilities (LTCFs).	**Infection Control in Long-Term Care Facilities** • Infection control challenges in LTCF settings • Implementing protocols for elderly and immunocompromised patients • Hygiene practices in communal living environments	- Field visit or virtual tour - Group discussion - Policy review activity	- Written assignment - SOP creation - Viva voce
Unit-VII	10	Prevent and respond to bloodborne pathogen exposure.	**Bloodborne Pathogens and Exposure Control** • Understanding bloodborne pathogens (HBV, HCV, HIV) • Exposure prevention and post-exposure prophylaxis (PEP) • Workplace safety and reporting protocols	- PEP flowchart activity - Safety gear demonstration - Role play	- OSCE - Flowchart submission - Case scenario exam
Unit-VIII	5	Coordinate environmental health practices to prevent infection.	**Environmental Health and Infection Prevention** • Role of environmental services in infection control • Cleaning, disinfecting, and sterilizing environmental surfaces • Managing outbreaks linked to	- Demonstration of cleaning protocols - Lecture - Facility audit	- Observation checklist - Facility hygiene report - MCQ test

			environmental factors (e.g., waterborne diseases)	exercise	
Unit-IX	10	Tailor infection prevention strategies for high-risk populations	**Infection Prevention in High-Risk Populations** • Infection control for pediatric, geriatric, and immunocompromised patients • Prevention of infections in pregnancy and neonatal care • Tailoring infection prevention practices for special populations	- Scenario-based learning - Case discussion - Cultural sensitivity workshop	- Case presentation - Cultural assessment checklist - Reflective writing
Unit-X	5	Understand ethical and legal implications in infection control.	**Ethical and Legal Aspects of Infection Control** • Legal obligations in infection control (reporting, documentation) • Ethical considerations in isolation and patient autonomy • Infection control in the context of public health laws	- Debate - Ethics case review - Policy analysis	- Essay writing - Legal scenario quiz - Group debate evaluation

Research Activity:

An independent research is to be carried out by the student.

INFECTION CONTROL AND PREVENTIVE NURSING

I. Procedures Observed

1. Observation of infection control practices during CT Scan and MRI procedures.

2. Review of infection prevention protocols in EEG, Hemodialysis, and Endoscopic Retrograde Cholangio Pancreaticogram (ERCP).

3. Infection prevention during Heart/Neuro/GI/Renal Surgeries, including sterilization and antiseptic techniques.

II. Procedures Assisted

1. Advanced life support system protocols, including infection control measures during resuscitation.

2. Basic cardiac life support, with emphasis on sterile techniques and prevention of cross-contamination.

3. Assisting in arterial line/arterial pressure monitoring and blood taking under strict aseptic conditions.

4. Arterial blood gas sampling and handling to prevent contamination.

5. Infection control during ECG recording and blood transfusion.

6. Safe practices in IV cannulation therapy and maintaining aseptic technique during catheter insertion.

7. Infection prevention during Arterial Catheterization and chest tube insertion.

8. Endotracheal intubations and managing airway under sterile conditions.

9. Monitoring infection prevention protocols during ventilation.

10. Insertion of central line/CVP line and connecting lines for dialysis, ensuring strict aseptic techniques.

III. Procedures Performed

1. Airway management including the application of oropharyngeal airway, oxygen therapy, and the use of CPAP with an emphasis on infection control practices.

Care of tracheostomy, including sterile techniques for dressing changes and tube management.

Endotracheal extubation, performed with strict adherence to infection prevention guidelines.

2. Cardiopulmonary resuscitation and Basic cardiac life support, maintaining sterile environments and minimizing infection risks.

3. Continuous monitoring of critically ill patients with infection control protocols in place (e.g., proper handling of monitoring equipment, avoiding cross-contamination during assessments).

4. Safe and sterile gastric lavage practices to prevent infection during the procedure.

5. Assessment of critically ill patients including infection surveillance, identifying risk factors and preventing nosocomial infections.

6. Admission and discharge protocols for critically ill patients, focusing on infection prevention and control during these processes.

7. Ensuring nutritional needs are met through proper infection control measures while administering gastrostomy feeds, pharyngeal feeds, jejunostomy feeds, and TPN.

8. Blood sugar level monitoring with aseptic techniques for insulin administration and infection prevention in diabetic patients.

9. Administration of drugs with focus on infection control, including IM, IV injections, and fluid therapy while preventing contamination.

10. Dialysis machine setup, monitoring, and closure with strict infection prevention measures, including sterilization of equipment and monitoring for signs of infection.

11. Infection prevention procedures, such as:

- Proper hand washing and adherence to disinfection & sterilization practices.
- Surveillance and fumigation protocols.
- Observing universal precautions in all clinical settings.

12. Collection of specimens using sterile methods to prevent contamination.

13. Setting, use, and maintenance of equipment, such as ventilators, O2 analyzers, monitoring equipment, transducers, defibrillators, infusion & syringe pumps, and centrifuge machines, ensuring each is cleaned and disinfected after use.

Signature of Resident/SNO