

SADHU VASWANI MISSION'S

SADHU VASWANI COLLEGE OF NURSING Founder- Sadhu T L Vaswani



10-10/1, Koregaon Park, Pune – 411001 Tel No: 02066099960 Email: principal@svcon.ac.in

Criterion II-Teaching Learning and Evaluation

- 2.6 Students Performance and Learning outcomes.
- 2. 6.1. Documents pertaining to Learning outcomes and graduate attributes.

2023-2024

COURSE OUTLINE

Third semester B.sc Nursing

Subject in-charge: Ms. Neha Bite, Clinical Instructor, SVCON

APPLIED MICROBIOLOGY AND INFECTION CONTROL INCLUDING SAFETY

Prepared by: Ms. Neha Bite

Signature of Subject In-charge

Signature of HOD

Signature of Principal

PLACEMENT: III SEMESTER THEORY: 2 Credits (40 hours)

PRACTICAL: 1 Credit (40 hours) (Lab/Experiential Learning – L/E)

SECTION A: APPLIED MICROBIOLOGY

THEORY: 20 hours

PRACTICAL: 20 hours (Lab/Experiential Learning – L/E)

DESCRIPTION: This course is designed to enable students to acquire understanding of fundamentals of Microbiology, compare and contrast different microbes and comprehend the magnetic in infection 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 control of spread by various microorganisms. control measures in hospital and community settings.

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

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



COURSE OUTLINE

T – Theory, L/E – Lab/Experiential Learning

Unit	Tim (Hr T	s) P	and principles of microbiology and its importance in	Historical perspective	Teaching/ Learning Activities • Lecture cum Discussion	• Short answer • Objective type	Name of the faculty Mrs. Anita Khandagle
			1	Concepts and terminologyPrinciples of microbiology			

II	10		growth of bacteria Identify Microorganisms	 General characteristics of Microbes: Structure and classification of Microbes Morphological types Size and form of bacteria Motility Colonization Growth and nutrition of microbes Temperature Moisture Blood and body fluids Laboratory methods for Identification of Microorganisms Types of Staining – simple, differential (Gram's, AFB), special –capsular staining (negative), spore, LPCB, KOH mount. Culture and media preparation – solid and liquid. Types of media – semi synthetic, synthetic, enriched, enrichment, selective and differential media. Pure culture techniques – tubedilution, pour, spread, streak plate. Anaerobic cultivation of bacteria 	 Lecture cum Discussion Demonstration Experiential Learning through visual 	 Short answer Objective type 	Ms. Neha Bite (Theory + practical)
----	----	--	---	--	---	--	---------------------------------------

Mrs. Anita Khandagle

III 4 6 (L/F	Describe the different disease producing organisms	Pathogenic organisms • Micro-organisms: Cocci – gram positive and gram negative; Bacilli –gram positive and gram negative • Viruses • Fungi: Superficial and Deep mycoses • Parasites	Lecture cum Discussion Demonstration Experiential learning through visual	 Short answer Objective type 	Mrs. Anita Khandagle (theory) Ms. Neha Bite (Practical)
IV 3 4 (L/E)	concepts of immunity, hyper sensitivity and immunization	Rodents & Vectors O Characteristics, Source, portal of entry, transmission of infection, Identification of disease producing micro-organisms Immunity Immunity: Types, classification Antigen and antibody reaction Hypersensitivity reactions Serological tests Immunoglobulins: Structure, types & properties Vaccines: Types & classification, storage and handling, cold chain, Immunization for various diseases Immunization Schedule	 Lecture Discussion Demonstration Visit to observe vaccine storage Clinical practice 	 Short answer Objective type Visit report 	Mrs. Anita Khandagle Ms. Neha Bite (Practical)

COURSE OUTLINE

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

	Name of the teacher	Mrs. Anita Khandagle (theory) Ms. Neha Bite (practical)	Mrs. Anita Khandagle (theory) Ms. Neha Bite (practical)
	Assessment Methods	Knowledge assessment MCQ Short answer	Performance assessment OSCE
ai Learning	Teaching/ Learning	• Lecture & Discussion • Experiential learning	• Lecture • Demonstration & Redemonstration
	Content	HAI (Hospital acquired Infection) • Hospital acquired infection • Bundle approach • Prevention of Urinary TractInfection (UTI) • Prevention of Surgical SiteInfection (SSI) • Prevention of Ventilator Associated events (VAE) • Prevention of Central Line Associated Blood StreamInfection (CLABSI) • Surveillance of HAI – Infection control team & Infection control	of Personal Protective ndard precaution and ns (Direct Contact, vention – CDC
Time (Hrs) Learning	P Outcomes	2 (E) Summarize the evidence based and effective patient care practices for the prevention of common healthcare associated infections in the healthcare Setting	4 (L) Demonstrate appropriate use of different types of PPEs and the critical use of risk assessment gui gui
Unit Tim	Ε ,		П 3 4(

Strong St

Mrs. Anita Khandagle (theory) Ms. Neha Bite (practical)	Khandagle (theory) Ms. Neha Bite (practical)	Mrs. Anıta Khandagle (theory) Ms. Neha Bite (practical)	Mrs. Anita Khandagle (theory) Ms. Neha Bite (practical)
• Performance assessment	 Short answer Objective type 	 Knowledge evaluation Quiz Performance assessment Checklist 	 Knowledge assessment by short answers, objective type Performance
• Lecture • Demonstrati on & Re- demonstrati on	 Lecture Discussion Experientia I learning through visit 	• Discussion	 Discussion Demonstration Experientia I learning through
Demonstrate the hand Hygiene. hand hygiene practice and its effectiveness on infection control Moments of Hand Hygiene WHO hand hygiene promotion	Disinfection and sterilization • Definitions • Types of disinfection and sterilization • Environment cleaning • Equipment Cleaning • Guides on use of disinfectants • Spaulding's principle	Specimen Collection (Review) • Principle of specimen collection • Types of specimens • Collection techniques and special considerations • Appropriate containers • Transportation of the sample • Staff precautions in handling specimens	BMW (Bio Medical WasteManagement) Laundry management process and infection control and prevention
	Illustrates disinfection and sterilization in the healthcare setting	Illustrate on what, when, how, why specimens are collected to optimize the diagnosis for treatment and management.	Explain on Bio Medical waste management & laundry management
1 2 (L)	1 2 (E)		2 (E)
H	2	>	VI 2

- 100		The State of the S	V		#P	Charles on the State of the Sta											
					Ms. Neha Bite					Ms. Neha						1	
Methods	-	Assessment				☐Short answer ☐Objective type ☐Assessment of assignment				• Knowledge	assessment • Performance	assessment	Checklist/ OSCE				
Teaching/	Activities	visit				☐Lecture☐Discussion☐Writtenassignment	-Recent AMR	(Antimicr obial resistance) guideline	. Lecture	tration		learnin • 0				
Content		Waste management process and infection prevention Staff precautions	• Laundry management	 Country ordinance and BMW National guidelines 2017: Segregation of wastes, Colour coded waste containers, waste collection & storage, Packaging & labeling, Transportation 		Antibiotic stewardship • Importance of AntibioticStewardship • Anti-Microbial Resistance	Prevention of MRSA, MDRO inhealthcare setting						• Care of lines, drains and tubing's Description policy and care — Physicaland Chemical	Blood & blood transfusion policy	Prevention of IV Complication	Prevention of Fall	Prevention of DVT
Learning	Outcomes					Explain in detail about Antibiotic stewardship,	AMR	Describe MRSA/MDRO	prevention		Enlist the patient P. safety indicators	health care	and	udit		- Pr	• Pr
Time (Hrs)	T					2			-		\$ (L/E)	he	th o	in t safe	brocess		
Unit	1					ПА					VIII						

			 Shifting and transporting of patients Surgical safety Care coordination event related tomedication reconciliation and administration Prevention of communication errors Prevention of HAI Documentation 				
	Captures analyzes incidents tevents for quality improvem	s and s ts and or	Incidents and adverse Events Capturing of incidents RCA (Root Cause Analysis) CAPA (Corrective and Preventive Action) Report writing	Lecture Role play Inquiry Based Learning	 Knowledge assessment Short answer Objective type 		
- -	Enumer and app of the go the patic settings.	ate IPSG lication oals in rut care	Enumerate IPSG (International Patient safety Goals) and application of the goals in the patient care settings. • Improve safety of High Alert medication • Ensure safe surgery • Reduce the risk of health care associated infection • Reduce the risk of patient harm resulting from falls • Reduce the harm associated with clinical alarm system	• Lecture	Objective type	Ms. Neha Bite	

na Na													
Ms. Neha Bite													
Mock drills Post tests Checklist													
• Lecture • Demonstr ation/ Experienti al learning													
Enumerate the various safety protocol protocols and its sustain) applications Radiation safety - Safety protocol surface, Standardize, Sustain)	Laser safetyFire safety	- Types and classification of fire - Fire alarms	 Firefighting equipment HAZMAT (Hazardous Materials) safety 	- Types of spill	- Spillage management	- MSDS (Material Safety Data Sheets)	• Environmental safety	- Risk assessment	- Aspect impact analysis	 Maintenance of Temp and Humidity (Department wise) 	- Audits	• Emergency Codes	• Role of Nurse in times of disaster
Enumerate the various safety protocols and its applications							_ -					•	•
3 (L/E)					E								
0													
×													

Knowledge assessment by short answers, objective type Short answer					
• Lecture • Discussion sleeture obj method • Journal review					
 Employee Safety Indicators Vaccination Needle stick injuries (NSI) prevention Fall prevention 	 Radiation safety Annual health check 	Healthcare Worker Immunization Program and	management of occupational exposure Occupational health ordinance	 Vaccination program for healthcare staff 	 Needle stick injuries and prevention and post exposure prophylaxis
Explain importance of employee safety indicators		Identify risk of occupational hazards.	n and sure cis.		•
XI 2					

Sadhu Vaswani College of Nursing COURSE OUTLINE

III Semester B. Sc. Nursing

Regular Batch (2023)

ADULT HEALTH NURSING I

Sign of Subject In charge

Sign of H.O.D.

HOD (Medical Surgical Nursing) Sedbu Veswani College of Nursing Sign of Principal

THEORY: 7 Credits (140 hours)

PRACTICUM: Lab/Skill Lab (SL) - 1 Credit (40 hours) Clinical - 6 Credits (480 hours)

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 nursingprocess 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 nursing 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.

Unit	Content	Duration (in hr)	Teacher's Name	Method of Teaching	Av Aids	Method of Evaluatio n
I	Introduction	6 (T) 4 (L/SL) hrs				
	 Evolution and trends of medical and surgical nursing International classification of diseases Roles and responsibility of a nurse in medical and surgical settings Outpatient department In-patient unit Intensive care unit Introduction to medical and surgical asepsis Inflammation, infection Wound healing – stages, influencing factors Wound care and dressing technique Care of surgical patient pre-operative post-operative Alternative therapies used in caring for patients with Medical Surgical Disorders 	1 1 1 1 1	Mrs. Rupali Ladke	 Lecture cum discussion Demonstration & Practice session Role play Visit to outpatient department, in patient and intensive care unit 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	 Short Answe r OSCE
II	Intraoperative Care	15 (T) 4 (L/SL) hrs.				
	 Organization and physical set up of the operation theatre Classification O.T Design Staffing Members of the OT team Duties and responsibilities of the nurse in OT Position and draping for common surgical procedures Instruments, sutures and suture materials, equipment for common surgical procedures Disinfection and sterilization of equipment Preparation of sets for common surgical procedure 	1 1 1 1 1 1 1	Mrs. Rupali Ladke	 Lecture cum Discussion Demonstration, Practice session, and Case Discussion Visit to receiving bay 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	Caring forpatien t intra operative ly Submit a list of disinfect ants used for instrume

	 Scrubbing procedures – Gowning, masking and gloving Monitoring the patient during the procedures Maintenance of the therapeutic environment in OT Assisting in major and minor operation, handling specimen Prevention of accidents and hazards in OT Anaesthesia – types, methods of administration, effects and stages, equipment & drugs Legal aspects 	1 1 1 1 2 1				nts with the action and precautio n
	Nursing care of patients with common signs and symptoms and management	6 (T) 4 (L/SL)				
	 Fluid and electrolyte imbalance Shock Pain 	2 2 2 2	Ms. Poonam Dhaigude	 Lecture, discussion, demonstration Case discussion 	Chalk board, Ppt, Charts, posters, videos	Short answerMCQCase report
IV	Nursing Management of patients with respiratory problems	18 (T) 4 (L)				
	 Review of anatomy and physiology of respiratory system Nursing Assessment – history taking, physical assessment and diagnostic tests Common respiratory problems: Upper respiratory tract infections Chronic obstructive pulmonary diseases Pleural effusion, Empyema Bronchiectasis Pneumonia Lung abscess Cyst and tumors Chest Injuries Acute respiratory distress syndrome Pulmonary embolism Health behaviours to prevent respiratory illness 	1 1 2 2 2 1 2 1 1 1 1 1	Ms. Sneha Kakade	 Lecture, discussion, Demonstration Practice session Case presentation Visit to PFT Lab 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	EssayShort answerOSCE
V	Nursing Management of patients with disorders of digestive system	16 (T) 5 (L)				

VI	 Review of anatomy and physiology of GI system Nursing assessment –History and physical assessment GI investigations , Common GI disorders: Oral cavity: lips, gums and teeth GI: Bleeding, Infections, Inflammation, tumors, Obstruction, Perforation & Peritonitis Peptic & duodenal ulcer, Mal-absorption, Appendicitis, Hernias Hemorrhoids, fissures, Fistulas Pancreas: inflammation, cysts, and tumors Liver: inflammation, cysts, abscess, cirrhosis, portal hypertension, hepatic failure, tumors Gall bladder: inflammation, Cholelithiasis, tumors Gastric decompression, gavage and stoma care, different feeding techniques Alternative therapies, drugs used in treatment of disorders of digestive system 	1 1 1 2 2 2 2 2 2 2 2 2 2	Mrs. Poonam Dhaigude	Demonstration	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	 Short answer Quiz OSCE
VI	Nursing Management of patients with cardiovascular	20 (T)				
	problems	5 (L)				
	 Review of anatomy and physiology of cardio-vascular system Nursing Assessment: History and Physical assessment Invasive & non-invasive cardiac procedures Disorders of vascular system - Hypertension, arteriosclerosis, Raynaud's disease, aneurysm and peripheral vascular disorders Coronary artery diseases: coronary atherosclerosis, Angina pectoris, myocardial infarction Valvular disorders: congenital and acquired Rheumatic heart disease: pericarditis, myocarditis, endocarditis, cardiomyopathies Cardiac dysrhythmias, heart block Congestive heart failure, corpulmonale, pulmonary edema, cardiogenic shock, cardiac tamponade Cardiopulmonary arrest 	1 1 3 3 2 3 2 2 3	Mrs. Rupali Ladke (15) Mrs. Sneha Kakade (10)	 Lecture, discussion Demonstration Practice session Case Discussion Health education Drug Book/presentatio n Completion of BCLS Module 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	 Care plan Drug record BLS/ BCLS• evaluat ion

	1.6.4.4.4.3.3	7 (7)				
VII	Nursing Management of patients with disorders of blood	7 (T)				
	 Review of Anatomy and Physiology of blood Nursing assessment: history, physical assessment & Diagnostic tests Anemia, Polycythemia Bleeding Disorders: clotting factor defects and platelets defects, thalassemia, leukemia, leucopenia, agranulocytosis Lymphomas, myelomas 	3 (L) 1 2 3 3 3	Ms. Sneha Kakade	 Field visit to blood bank Counseling 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	 Interpretation of blood reports Visit report
VIII	Nursing management of patients with disorders of	8 (T)			Videos	
	endocrine system	2 (L)		1		
	 Review of anatomy and physiology of endocrine system Nursing Assessment –History and Physical assessment Disorders of thyroid and Parathyroid, Adrenal and Pituitary (Hyper, Hypo, tumors) Diabetes mellitus 	2 2 3 3	Ms. Poonam Dhaigude	 Lecture, discussion, Demonstration Practice session Case Discussion Health education 	Chalk board, OHP Transparenc y, Power point presentation Charts, posters, videos	Prepare health education on selfadministration of insulin Submits diabetic diet plan
IX	Nursing management of patients with disorders of	8 (T)				
	Integumentary system	2 (L)	Ma		Chalk	
	 Review of anatomy and physiology of skin Nursing Assessment: History and Physical assessment Infection and infestations; Dermatitis Dermatoses; infectious and Non infectious 	1 1 1 1	Ms. Sneha Kakade		board, OHP Transparenc y, Power	
	 Acne, Allergies, Eczema & Pemphigus Psoriasis, Malignant melanoma, Alopecia Special therapies, alternative therapies Drugs used in treatment of disorders of integumentary system 	2 2 1 1			point presentation Charts, posters, videos	

X	Nursing management of patients with musculoskeletal problems	16 (T) 4 (L)				
	 Review of Anatomy and physiology of the musculoskeletal system Nursing Assessment: History and physical assessment, 	1	Mrs. Rupali	Lecture Discussion	Chalk board, OHP	• Nursin g care
	 diagnostic tests Musculoskeletal trauma: Dislocation, fracture, sprain, 	1	Ladke	DemonstrationCase Discussion	Transparenc y, Power	planPrepar
	 strain, contusion, amputation Musculoskeletal infections and tumors: Osteomyelitis, 	3		Health education	point presentation	e health
	benign and malignant tumour	2			Charts, posters,	teachin g on
	walking	3			videos	care of patient
	 Musculoskeletal inflammation: Bursitis, synovitis, arthritis 	1				with cast
	 Special therapies, alternative therapies Metabolic bone disorder: Osteoporosis, osteomalacia and Paget's disease 	2				
	 Spinal column defects and deformities – tumor, prolapsed intervertebral disc, Pott's spine Rehabilitation, prosthesis Replacement surgeries 	3 2 1				
XI	Nursing management of patients with Communicable diseases	20 (T) 3 (L)				
	 Overview of infectious diseases, the infectious process Nursing Assessment: History and Physical assessment, Diagnostic tests 	1.	Ms. Poonam Dhaigude	Lecture, discussion, demonstration	Chalk board, OHP Transparenc	• Prepares and submits
	 Tuberculosis Diarrhoeal diseases, hepatitis A-E, Typhoid Herpes, chickenpox, Smallpox, Measles, Mumps, 	1 2 2	(13) Ms. Sneha	Practice sessionCase Discussion/ seminar	y, Power point presentation	protocol on various
	InfluenzaMeningitisGas gangrene	1 1	Kakade (10)	Health educationDrug Book/ presentation	Charts, posters, videos	isolation techniqu es
	 Leprosy Dengue, Plague, Malaria, Chikungunya, swine flu, 	1 2	P	Refer TB Control		

Filariasis Diphtheria, Pertussis, Tetanus, Poliomyelitis COVID-19 Special infection control measures: Notification, Isolation, Quarantine, Immunization	3 & Managem module module	ent
isolation, Quarantine, immunization		

Faculty wise hours allotment

Sr.	Name of faculty	Number of hours
1.	Mrs. Rupali Ladke	64
2.	Ms. Poonam Dhaigude	54
3.	Ms. Sneha Kakade	62
	Total	180