PLACEMENT:IIISEMESTER

THEORY:2Credits(40hours)

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

SECTION A: APPLIEDMICROBIOLOGY

Theory: 20 hours

Practicum: 20hours(Lab/ExperientialLearning–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 means of transmission and control of spread by variousmicroorganisms.Italsoprovidesopportunitiesfor practicinginfectioncontrolmeasuresinhospitalandcommunitysettings.

COMPETENCIES: Oncompletionofthecourse,thestudentswillbeableto:

1. Identifytheubiquityanddiversityofmicroorganismsinthehumanbodyandtheenvironment.
2. Classifyandexplainthemorphologyandgrowthofmicrobes.
3. Identifyvarioustypesofmicroorganisms.
4. Exploremechanismsbywhichmicroorganismscausedisease.
5. Developunderstandingofhowthehumanimmunesystemcounteractsinfectionbyspecificand non-specificmechanisms.
6. Applytheprinciplesofpreparationanduseofvaccinesinimmunization.
7. Identifythecontributionofthemicrobiologistandthe microbiology laboratory tothediagnosisofinfection.

Unit	Time (Hrs)		LearningOutcomes	Content	Teaching/Learning Activities	AssessmentMethods
	T	P				
I	3		Explain conceptsand principles ofmicrobiology andits importance innursing	**Introduction:** • Importanceand relevancetonursing • Historicalperspective • Conceptsandterminology • Principlesofmicrobiology	• Lecture cumDiscussion	• Shortanswer • Objectivetype
II	10	10(L/E)	Describestructure,classificationmorphology andgrowthofbacteria IdentifyMicroorganisms	**GeneralcharacteristicsofMicrobes:** • StructureandclassificationofMicrobes • Morphologicaltypes • Sizeandformofbacteria • Motility • Colonization • Growthandnutritionofmicrobes • Temperature • Moisture • Bloodandbodyfluids • Laboratory methods forIdentificationofMicroorganisms • Types of Staining – simple,differential (Gram's, AFB), special –capsular staining (negative), spore,LPCB,KOHmount. • Cultureandmediapreparation– solid and liquid. Types of media –semi synthetic, synthetic, enriched,enrichment, selective and differentialmedia. Pure culture techniques – tubedilution, pour, spread, streak plate.Anaerobiccultivationofbacteria	• Lecture cumDiscussion • Demonstration • ExperientialLearning throughvisual	• Shortanswer • Objectivetype
III	4	6(L/E)	Describe thedifferent diseaseproducingorganisms	**Pathogenicorganisms** • Micro-organisms: Cocci – grampositive and gram negative; Bacilli – grampositiveand gramnegative • Viruses • Fungi:SuperficialandDeepmycoses • Parasites • Rodents&Vectors • o Characteristics, Source, portal ofentry, transmission of infection,Identificationofdiseaseproducing micro-organisms	• Lecture cumDiscussion • Demonstration • Experientiallearning throughvisual	• Shortanswer • Objectivetype

Unit	Time (Hrs)		Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
IV	3	4(L/ E)	Explain theconceptsof immunity, hypersensitivity andimmunization	• **Immunity** • Immunity:Types,classification • Antigenandantibodyreaction • Hypersensitivityreactions • Serologicaltests • Immunoglobulins:Structure,types&properties • Vaccines: Types & classification,storage and handling, cold chain,Immunizationforvariousdiseases • ImmunizationSchedule	• Lecture • Discussion • Demonstration Visittoobservevaccinestorage • Clinicalpractice	• Shortanswer Objective type • Visitreport

SECTION B: INFECTIONCONTROL&SAFETY

THEORY: 20hours

PRACTICAL/LAB:20hours(Lab/ExperientialLearning–L/E)

DESCRIPTION: This course is designed to help students to acquire knowledge and develop competencies required forfundamental patient safety and infection control in delivering patient care. It also focuses on identifying patient safetyindicators,preventing and managinghospitalacquiredinfections, andinfollowing universalprecautions.

COMPETENCIES: Thestudentswillbeableto:

1. DevelopknowledgeandunderstandingofHospitalacquiredInfections(HAI)andeffectivepracticesforprevention.
2. Integratetheknowledgeofisolation(Barrierandreversebarrier)techniquesinimplementing variousprecautions.
3. DemonstrateandpracticestepsinHandwashingandappropriateuseofdifferenttypesofPPE.
4. Illustratevariousdisinfectionandsterilizationmethodsandtechniques.
5. Demonstrateknowledgeandskillinspecimen collection,handlingandtransporttooptimizethediagnosisfortreatment.
6. IncorporatetheprinciplesandguidelinesofBioMedicalwastemanagement.
7. ApplytheprinciplesofAntibioticstewardshipinperformingthenurses'role.
8. Identify patientsafety indicatorsandperformtheroleof nurseinthepatientsafety audit process.
9. ApplytheknowledgeofInternationalPatientSafetyGoals(IPSG)inthepatientcaresettings.
10. Identifyemployeesafetyindicatorsandriskofoccupationalhazards.
11. Developunderstandingofthevarioussafetyprotocolsandadheretothoseprotocols.

Unit	Time (Hrs)		Learning Outcome	Content	Teaching/Learning Activities	Assessment Methods
I	2	2(E)	Summarize theevidence basedand effectivepatient carepracticesforthepreventionofcommonhealthcareassociated infectionsinthe healthcare setting	**HAI(HospitalacquiredInfection)** • Hospitalacquiredinfection • Bundleapproach - Prevention of Urinary TractInfection(UTI) - PreventionofSurgicalSiteInfection(SSI) PreventionofVentilator Associatedevents(VAE) -Prevention of Central LineAssociated Blood StreamInfection(CLABSI) Surveillance of HAI – Infectioncontrol team & Infection controlcommittee	• Lecture &Discussion Experientiallearning	• Knowledgeassessment • MCQ Shortanswer
II	3	4(L)	Demonstrateappropriate useof differenttypes of PPEsand the criticaluse of riskassessment	**Isolation Precautions and use ofPersonal Protective Equipment(PPE)** • Typesofisolationsystem,standardprecaution and transmission-basedprecautions (Direct Contact,Droplet, Indirect) • Epidemiology & Infectionprevention– CDCguidelines EffectiveuseofPPE	• Lecture Demonstration &Re-demonstration	• Performanceassessment OSCE

III	1	2(L)	Demonstrate thehand hygienepractice and itseffectiveness oninfectioncontrol	**HandHygiene** • TypesofHandhygiene. • Handwashinganduseofalcoholhand rub • MomentsofHandHygiene • WHOhandhygienepromotion	• Lecture • Demonstration &Re-demonstration	• Performanceass essment
IV	1	2(E)	Illustratesdisi nfection andsterilizatio n inthe healthcaresetti ng	**Disinfectionandsterilization** • Definitions • Typesofdisinfectionandster ilization • Environmentcleaning • EquipmentCleaning • Guidesonuseofdisinfectants Spaulding'sprinciple	• Lecture • Discussion • Experientiallear ning throughvisit	• Shortanswer • Objectivetype
V	1		Illustrate onwhat, when,how, whyspecimens arecollected tooptimize thediagnosis fortreatment andmanagement.	**SpecimenCollection(Review)** • Principleofspecimencollection • Typesofspecimens • Collectiontechniquesandspecialcon siderations • Appropriatecontainers • Transportationofthesample • Staffprecautionsinhandlingspe cimens	• Discussion	• Knowledgeeva luation • Quiz • Performanceass essment • Checklist
VI	2	2(E)	Explain on BioMedical wastemanagement &laundrymanagement	**BMW(BioMedicalWasteMa nagement)** *Laundry*	• Discussion • Demonstration • Experientiallear ningthrough	Knowledgeassessm ent byshort answers,objectivety pe , Performance
Unit	**Time (Hrs)**		**Learning Outcome**	**Content**	**Teaching/Learning Activities**	**Assessment Methods**
				managementprocessandinfectioncon trolandprevention	•	

VII	2		Explain in detailabout Antibioticstewardship,AMR DescribeMRSA/MDRO and itsprevention	**Antibioticstewardship** • ImportanceofAntibioticStewardship • Anti-MicrobialResistance • PreventionofMRSA,MDROinhealthcare setting	• Lecture • Discussion • Writtenassignment –Recent AMR(Antimicrobialresistance)guidelines	• Shortanswer • Objectivetype • Assessmentofassignment
VIII	3	5(L/E)	Enlist the patientsafety indicatorsfollowed in ahealth careorganization andthe role of nursein the patientsafety auditprocess Captures andanalyzesincidents andevents forqualityimprovement	**PatientSafetyIndicators** • CareofVulnerablepatients • Preventionof Iatrogenicinjury • Careoflines, drainsandtubing's • Restrain policy and care – PhysicalandChemical • Blood&blood transfusionpolicy • PreventionofIVComplication • PreventionofFall • PreventionofDVT • Shiftingandtransportingofpatients • Surgicalsafety • Carecoordinationeventrelatedtomedication reconciliation andadministration • Preventionofcommunicationerrors • PreventionofHAI • Documentation **IncidentsandadverseEvents** • Capturingofincidents • RCA(RootCauseAnalysis) • CAPA(CorrectiveandPreventiveAction) • Reportwriting	• Lecture • Demonstration • Experiential learning • Lecture • Roleplay • Inquiry BasedLearning	• Knowledgeassessment • Performanceassessment • Checklist/OSCE • Knowledgeassessment • Shortanswer Objectivetype
IX	1		Enumerate IPSGand applicationof the goals inthe patient caresettings.	**IPSG(InternationalPatientsafetyGoals)** • Identifypatientcorrectly • Improveeffectivecommunication • ImprovesafetyofHighAlertmedication • Ensuresafesurgery • Reducetheriskofhealthcareassociatedinfection • Reduce the risk of patient	• Lecture • Roleplay	• Objectivetype

				harmresultingfromfalls • Reducetheharmassociatedwithclinicalalarmsystem		
X	2	3(L/E)	Enumerate thevarious safetyprotocols and itsapplications	**Safetyprotocol** • 5S(Sort,Setinorder,Shine,Standardize,Sustain) • Radiationsafety • Lasersafety • Firesafety - Typesandclassificationof fire - Firealarms - Firefightingequipment • HAZMAT(HazardousMaterials)safety - Typesofspill - Spillagemanagement - MSDS (Material Safety DataSheets) • Environmentalsafety - Riskassessment - Aspectimpactanalysis - Maintenance of Temp andHumidity(Departmentwise) - Audits • EmergencyCodes • RoleofNurseintimesofdisaster	• Lecture • Demonstration/ Experientiallearning	• Mockdrills • Posttests • Checklist
XI	2		Explainimportance ofemployeesafety indicators Identify risk ofoccupationalhazards,prevention andpost exposureprophylaxis.	**EmployeeSafetyIndicators** • Vaccination Needlestickinjuries(NSI) prevention • Fallprevention • Radiationsafety • Annualhealthcheck **HealthcareWorkerImmunizationProgram and management ofoccupationalexposure** • Occupationalhealthordinance • Vaccinationprogramforhealthcarestaff • Needlestickinjuriesandpreventionandpostexposure prophylaxis	• Lecture • Discussion	• Knowledgeassessment byshortanswers,

Distribution of teaching hours in Microbiology

		SECTION A		SECTION B	
STRATEGY		**Teaching hours**		**Teaching hours**	
Didactic	**Lectures**	20	20 Hrs	20	20 Hrs
Non- didactic	Lab/Experiential Learning–L/E	18	20 Hrs	18	20 Hrs
	Tutorials	2		2	
Total			40 Hrs		40 Hrs

TOPICS & OUTCOMES

Subject	Number of Themes	Number of outcomes
SECTION A APPLIEDMICROBIOLOGY	04	18
SECTION B INFECTIONCONTROLINCLUDING SAFETY	11	21

SECTION A: DISTRIBUTION OF THEORY HOURS

S. N	Theme	Topics	Teaching hrs.
1	**Introduction:**	**Introduction:**	03
2	**Generalcharacteristics ofMicrobes:**	**GeneralcharacteristicsofMicrobes:**	10
3	**Pathogenicorganisms**	**Pathogenicorganisms**	04
4	**Immunity**	**Immunity**	03
TOTAL			20 Hours

SECTION B: DISTRIBUTION OF THEORY HOURS

S. N	Theme	Topics	Teaching hrs.
1	**HAI (Hospital acquired Infection)**	**HAI (Hospital acquired Infection)**	02
2	**Isolation Precautions and use of Personal Protective Equipment(PPE)**	**Isolation Precautions and use of Personal Protective Equipment(PPE)**	03
3	**HandHygiene**	**HandHygiene**	01
4	**Disinfectionandsterilization**	**Disinfectionandsterilization**	01
5	**SpecimenCollection(Review)**	**SpecimenCollection(Review)**	01
6	**BMW(BioMedicalWasteManagement)** *Laundrymanagementprocessandinfectioncontrolandprevention*	**BMW(BioMedicalWasteManagement)** *Laundrymanagementprocessandinfectioncontrolandprevention*	02
7	**Antibioticstewardship**	**Antibioticstewardship**	02
8	**PatientSafetyIndicators**	**PatientSafetyIndicators**	03
9	**IPSG(InternationalPatientsafetyGoals)**	**IPSG(InternationalPatientsafetyGoals)**	01
10	**Safetyprotocol**	**Safetyprotocol**	02
11	**EmployeeSafetyIndicators**	**EmployeeSafetyIndicators**	02

APPLIED MICROBIOLOGY: SECTION A

					Core competencies		Non-core competencies	Total Hours
Theme and total hours allotted	Objectives	Topic	Code No	Competency	Must know	Desirable to know	Nice to know	
I 3 (T)	Introduction: At the end of unit students are able to-- Knowledge: Understand and describe the importance of microbiology used in the nursing. Attitude: Students can apply the principles of microbiology in nursing.	Introduction	MICR201:III SEM1.1	Explain the importance of microbiology and principles of microbiology in nursing.	Importanceand relevancetonursing Conceptsandterminology Principlesofmicrobiology			2 hrs
			MICR201:III SEM1.2	. Describe the historical perspective regarding contribution of microbiologist in the field of microbiology.		Historicalperspective		1 hr
II 10 (T) 10(L/E)	At the end of unit students are able to Knowledge: Understand and explain general characteristics of microbes, their types and growth and nutrition and culture media in the study of microbiology. Students can gain the knowledge in laboratory methods. Skill: Collect samples correctly for microbiological studies. Prepare slides and staining.	GeneralcharacteristicsofMicrobes:	MICR201:III SEM2.1	Describe the structure and classification of microbes Enumerate the morphological types their size and various forms of bacterias.	Structureandclassificationof MicrobesMorphologicaltypes, Sizeandformofbacteria			1 hr

	Attitude: Incorporate this knowledge in nursing practice.		MICR201:III SEM2.2	Explain the requirements for growth and nutrition of microbes	Growthandnutritionofmicrobes, Temperature Moisture, Bloodandbodyfluids			1 hr
			MICR201:III SEM2.3	Explain the various laboratory methods for identification of microorganisms.	Laboratory methods forIdentificationofMicroorganisms			1 hr
			MICR201:III SEM2.4	Define the term staining, Describe the types and techniques of staining.	Types of Staining – Simple and differential methods (Gram's, AFB)			1hr
			MICR201:III SEM2.5	Explain the differential methods Capsular staining, spore LPCB and KOH mount	.special – capsular staining (negative), spore,LPCB, KOHmount			1hr
			MICR201:III SEM2.6	Define the term Culture media And Describe the preparation, components of culture media of solid and	Cultureandmediapreparation–solid and liquid	.		1 hr

				liquid media.				
			MICR201:III SEM2.7	Enumerate the types and of culture media		Types of media – semi synthetic, synthetic, enriched,enrichment, selective and differential media		2 hrs
			MICR201:III SEM2.8	Describe the methods of culture media.		Pure culture techniques – tubedilution, pour, spread, streak plate.Anaerobiccultivationofbacteria		1 hrs
			MICR201:III SEM2.9	Describe the characteristics and functions of motility and colonization			Motility and Colonization	1 hr
III 4 (T) 6(L/E)	At the end of unit students are able to Knowledge: Understand and describe Disease causing microorganisms, cocci, viruses, fungi, parasites rodents and vectors.	**Pathogenic organisms**	MICR201:III SEM3.1	Describe thedifferentdiseaseproducing Cocci – grampositive and gram negative; Bacilli –	Micro-organisms: Cocci – grampositive and gram negative; Bacilli –			1 hr

	Skill: Collect, preserve and send samples to laboratory in specified way. Attitude: Appreciate this knowledge and importance of collection of samples in diagnosis and treatment of patients.			grampositiveandgramnegative organisms Explain the cultivation and replication methods of viruses.	grampositiveandgramnegative Viruses			
			MICR201:III SEM3.2	Describe the characteristics, morphological types and diseases producing from the fungi. SuperficialandDeepmycoses	Fungi:SuperficialandDeepmycoses			1 hr
			MICR201:III SEM3.3	Describe the characteristics, morphological types and diseases producing fromParasitesRodents&Vectors	Parasites Rodents&Vectors			1 hr
			MICR201:III SEM3.4	Identify the Characteristics, Source, portal ofentry, transmission of infection,Identificationofdiseaseproducingmicro-organisms		Characteristics, Source, portal ofentry, transmission of infection,Identificationofdiseaseproducingmicro-organisms		1 hr

IV 3 (T) 4 (L/E)	Immunity At the end of unit students are able to Knowledge: Understand and describe the importance, types, classification of immunity. Attitude: Incorporate this knowledge in patient education.	Immunity	MICR201:III SEM4.1	Explain theconceptsofimmunity, types of immunity, classification and functions of immunity. Define the term antigen and antibody Identify the antigen, antibody, and hypersensitivity reaction.	Immunity:Types,classification Antigenandantibodyreaction Hypersensitivityreactions			1 hr
			MICR201:III SEM4.3	Define the term vaccination, Enumerate the types and classification storage and handling, cold chain,	storage and handling, cold chain,Immunizationforvariousdiseases ImmunizationSchedule			½ hr
				Identify the immunization of various disease condition.	Immunizationforvariousdiseases ImmunizationSchedule			½ hr
			MICR201:III SEM4.4	Describe the serological tests, and identify the types of immunoglobuli		Serologicaltests Immunoglobulin:Structure,types& properties		1 hr

				n with respect to definition.		Vaccines: Types & classificatio n		

SECTION B – INFECTIONCONTROL&SAFETY

					Core competencies		Non-core competencies	Total hrs
Theme and total hours allotted	**Objectives**	**Topic**	**Code No**	**Competency**	**Must know**	**Desirable to know**	**Nice to know**	
I 2 (T) 2(E)	At the end of unit students are able to **Knowledge:** evidence basedandeffectivepatientcarepracticesfortheprevention ofcommonhealthcareassociatedinfectionsinthe Healthcare Setting. **Skill:** Apply the evidence based clinical practice in the health care setting for the prevention of hospital acquired infection. **Attitude:** Incorporate this knowledge in patient education as well as in the clinical practices.	HAI(HospitalacquiredInfection)	MICR201:III SEM1.1	Explain Hospitalacquiredinfection Describe about the bundle approach prevention of urinary tract infection(UTI) Prevention of surgical site infection (SSI)Ventilator Associatedevents(VAE) Central Line Associated Blood StreamInfection(CLABSI)	Hospitalacquiredinfection •Bundleapproach -Prevention of Urinary TractInfection(UTI) -PreventionofSurgicalSite Infection(SSI) PreventionofVentilator Associatedevents(VAE) -Prevention of Central Line Associated Blood StreamInfection(CLABSI)			1hr

			MICR201:III SEM1.2	Summarize theevidence basedand effectivepatient carepracticesforthe prevention ofcommonhealthcareassociatedinfectionsinthe Healthcare setting		Surveillance of HAI – Infectioncontrol team & Infection controlcommittee		1hr
II 3 (T) 4(L)	At the end of unit students are able to **Knowledge:** Describe the types of isolation system, standard precaution and transmission based precautions and also infection prevention CDC guidelines **Skill:** Apply the Infectionprevention–CDCguidelines and effective use of PPE kit **Attitude:** Incorporate this knowledge in patient education as well as in the clinical practices.	Isolation Precautions and use of Personal Protective Equipment(PPE)	MICR201:III SEM2.1	Describe the types of isolation system and standardprecaution and transmission-basedprecautions (Direct Contact,Droplet, Indirect)	Typesofisolationsystem,standardprecaution and transmission-basedprecautions (Direct Contact,Droplet, Indirect)			1 hr
			MICR201:III SEM2.2	Explain the appropriate Epidemiology and infection prevention–CDCguidelines		Epidemiology and infection prevention-CDCguidelines		1 hr
			MICR201:III SEM2.3	Demonstrateappropriate useof differenttypes of PPEsand the criticaluse of riskassessment			Effectiveuseof PPE	1 hr
III **1(T)** **2(L)**	**HandHygiene** At the end of unit students are able to **Knowledge:** Describe the types of hand hygiene techniques. **Skill:** Demonstrate	HandHygiene	MICR201:III SEM3.1	Demonstrate and explain the hand hygienepractice and itseffectiveness of infectioncontrol	TypesofHandhygiene. Handwashinganduseofalcoholhandrub Momentsof			1 hr

	thehandhygienepractice and itseffectivenessoninfectionc ontrol. **Attitude:** Incorporate this knowledge in patient education as well as in the clinical practices.				HandHygien e WHOhandhygi enepromotion			
IV 1(T) 2 (E)	**Disinfectionandsterilization** At the end of unit students are able to **Knowledge**Unders tand and illustrate the types of disinfectionandster ilization in health care setting. **Skill:** Perform disinfection of unit and sterilization of various articles **Attitude:** Appreciate the importance of sterilization and disinfection in infection control	Disinfectionandsterilizat ion	MICR201:I II SEM4.1	Illustratesdisinfection andsterilization inthe healthcaresetting	Definitions Types ofdisi nfecti onan dsteri lizatio n Environmentcl eaning EquipmentClea ning Guidesonuseof disinfectants Spaulding'sprin ciple			1 hr
V 1 (T)	At the end of unit students are able to **Knowledge:** Illustrate onwhat, when,how, whyspecimens arecollected tooptimize thediagnosis fortreatment andmanagement **Skill:** Perform collection,	**SpecimenCollection(Re view)**	MICR201:I II SEM5.1	Illustrate onwhat, when,how, whyspecimens arecollected tooptimize thediagnosis fortreatment andmanagement.	Principleofspec imencollection Typesofspecim ens Collectionte chniquesand specialconsi derations Appropriateco ntainers			1 hr

	transportation of the samples in appropriate containers. **Attitude:** Appreciate the importance of Principleofspecimencollection and Staffprecautionsinhandling specimens.				Transportation ofthesample Staffprecautionsinhandlingspecimens			
VI 2(T) 2(E)	At the end of unit students are able to • **Knowledge:** Explain the Wastemanagementprocessandinfectionprevention and *Laundrymanagement processandinfectioncontrolandprevention* • **Skill:** Apply the Wastemanagement, laundry management processandinfectionprevention during clinical practices. **Attitude:** Appreciate the importance of biomedical waste management Segregation of wastes, Colourcoded waste containers storage,Packaging&labeling and Transportation	BMW(BioMedcalWasteManagement) *Laundrymanagementprocessandinfectioncontrolandprevention*	MICR201:III SEM6.1	Explain on BioMedical wastemanagement &laundrymanagement and also describe the color coding system used in segregation of wastecollection&storage,Packaging&labeling,Transportation.	Wastemanagementprocessandinfectionprevention Staffprecautions Laundrymanagement Country ordinance and BMWNational guidelines 2017:Segregation of wastes, Colourcoded waste containers, wastecollection &storage,Packaging&labeling,Transportation			2 hour
VII 2(T)	At the end of unit students are able to • **Knowledge:** Understand and describethe ImportanceofAntibioticStewardship Anti-MicrobialResistancePreve	Antibioticstewardship	MICR201:III SEM7.1	Explain in detail about Antibiotic stewardship,AMR	Importanceof Antibiotic Stewardshi			1 hour

	ntionofMRSA,MDROinhealthcare setting • **Skill:** To administer the antibiotics in the health care setting. • **Attitude:**Appreciate the importance of AntibioticStewardship and their side effects				p Anti-MicrobialResistance			
			MICR201:III SEM7.2	DescribeMRSA/MDRO and itsprevention		PreventionofMRSA,MDROinhealthcare setting		1 hour
VIII 3 (T) 5(L/E)	At the end of unit students are able to **Knowledge:** Understand and Enlist the patientsafety indicatorsfollowed in ahealth careorganization andthe role of nursein the patientsafety auditprocess **Skill:** Apply all the patient care safety indicators in the health care setting. **Attitude:** Appreciate the importance of PatientSafetyIndicators andthe role of nursein the patientsafety auditprocess and Captures andanalyzesincidents andevents forqualityimprovement	PatientSafetyIndicators	MICR201:III SEM8.1	Enlist the patientsafety indicatorsfollowed in ahealth careorganization Describe the restrain policy and care – PhysicalandChemical and describe the blood&blood transfusionpolicy, preventionofIVComplication	CareofVulnerable patients Preventionof Iatrogenicinjury Careoflines, drainsandtubing‘s Restrain policy and care – PhysicalandChemical Blood&blood transfusionpolicy PreventionofIVComplication			1 hour

				Describe the preventionofFall, preventionofDVT, Shiftingandtransportingofpatients and Surgicalsafety Explain the carecoordinationeventrelatedto medication reconciliation andadministration Preventionofcommunicationerrors, PreventionofHAI And documentation	PreventionofFall PreventionofDVT Shiftingandtransportingofpatients Surgicalsafety Carecoordinationeventrelatedtomedication reconciliation andadministration Preventionofcommunicationerrors PreventionofHAI Documentation			
			MICR201:III SEM8.2	Describe theCapturingofincidents like • RCA(RootCauseAnalysis)		**IncidentsandadverseEvents** • Capturingofincidents • RCA(RootCauseAnalysis)		1 hours
			MICR201:III SEM8.3	Describe the CAPA(CorrectiveandPreventiveAction) Reportwriting			CAPA(CorrectiveandPreventiveAction) Report writing	1hour
IX 1 (T)	At the end of unit students are able to **Knowledge**: Understand The InternationalPatientsafety Goals. **Skill:** Applicationof the **IPSG** goals inthe patient	IPSG(InternationalPatientsafetyGoals)	MICR201:III SEM9.1	Enumerate IPSGand applicationof the goals inthe patient caresettings.	Identifypatientcorrectly Improveeffectivecommunication ImprovesafetyofHighAlertmedication			1 hour

	caresettings **Attitude:** Appreciate the importance of InternationalPatientsafetygoals and reducetheriskofhealth careassociatedinfection harmresultingfromfalls and withclinicalalarmsystem				Ensuresafesurgery Reducetheriskofhealth careassociatedinfection Reduce the risk of patient harmresultingfromfalls Reducetheharmassociatedwithclinicalalarmsystem			
X **2(T)** **3(L/E)**	At the end of unit students are able to **Knowledge**: Understand And enumerate thevarious safetyprotocols. **Skill:** Applicationof various safety protocol in the health care setting. **Attitude:** Appreciate and educate the importance and use various of safety protocols in the health care setting.	Safetyprotocol	MICR201:III SEM10.1	Describe the 5S(Sort,Setinorder,Shine,Standardize,Sustain) Radiationsafety Lasersafety - Firesafety and Firefightingequipment	5S(Sort,Setinorder, Shine,Standardize, Sustain) Radiationsafety Lasersafety Firesafety - Typesandclassificationof fire - Firealarms - Firefightingequipment			1/2hour
			MICR201:III SEM10.2	- Explain the HAZMAT(HazardousMaterials)safety, Spillagemanagement - MSDS (Material Safety DataSheets)	HAZMAT(HazardousMaterials)safety - Typesofspill - Spillagemanagement - MSDS (Material Safety DataSheets)			½ hour

			MICR201:III SEM10.3	Describe the Environmentalsafety, Audits EmergencyCodes RoleofNurseintimesofdisaster		Environmentalsafety -Riskassessment -Aspectimpactanalysis Maintenance of Temp and -Humidity(Departmentwise) -Audits EmergencyCodes RoleofNurseintimesofdisaster		1 hour
XI 2 (T)	At the end of unit students are able to **Knowledge**: Understand and explain the importance ofemployeesafety **Skill:** Apply and Identify risk of occupational hazards,prevention andpost exposureprophylaxis. **Attitude:** Appreciate and educate the importance ofemployeesafety in the	EmployeeSafetyIndicators	MICR201:III SEM11.1	Explainimportance ofemployeesafety indicators including vaccination, needle stick injuries (NSI) prevention Describe about the employee safety indicators including Fallprevention, Radiationsafety and Annualhealthcheck	Vaccination Needlestickinjuries(NSI) prevention Fallprevention Radiationsafety Annualhealthcheck			1 hour

	health care setting.		MICR201:III SEM11.2	Identify risk ofoccupationalhazards,prevention andpost exposureprophylaxis.		HealthcareWorkerImmunizationProgram and management ofoccupationalexposure - Occupationalhealthordinance - Vaccinationprogramforhealthcarestaff - Needlestickinjuriesandpreventionandpostexposure prophylaxis		1 hour

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TEACHING STRATEGY:

Theory Hours: 40 Clinical/Practical Hours:40

SECTION A: DISTRIBUTION OF NON DIDACTIC HOURS (20)

PRACTICALS 20hrs

SR NO	Competency no	Competency	Domain	T-L Method	Teaching Hrs
1	MICR201:III SEM2.9	Methods Of Motility &Colonization Of Various Bacteria	K,S	Demonstration ExperientialLearning throughvisual	3hrs
2	MICR201:III SEM2.3	Laboratory methods forIdentificationofMicroorganisms	K,S	Demonstration ExperientialLearning throughvisual	2 hrs
3	MICR201:III SEM2.4	Staining techniques and various methods of staining.	K,S	Demonstration ExperientialLearning throughvisual	3 hrs
4	MICR201:III SEM2.7	Identification of Cultureandmediapreparation	K,S	Demonstration ExperientialLearning throughvisual	2 hrs
5	MICR201:III SEM3.1	• Identificationofdiseaseproducingmicro-organisms • Micro-organisms: Cocci – grampositive and gram negative; Bacilli –grampositiveand gramnegative	K,S	Demonstration ExperientialLearning throughvisual	3 hrs
6	MICR201:III SEM3.3	• Viruses, Fungi:SuperficialandDeepmycoses, Parasites, Rodents&Vectors		Demonstration ExperientialLearning throughvisual	3 hrs
7	MICR201:III SEM4.1	• Immunity:Types,classification • Antigenandantibodyreaction • Hypersensitivityreactions • Vaccines: Types & classification,storage and handling, cold chain,	K,S	• Discussion • Demonstration Experiential learning through observation of vaccinestorage Clinicalpractice	4 hrs

SECTION B: DISTRIBUTION OF NON DIDACTIC HOURS (20)

- **PRACTICALS 20 hrs**

SR NO	Competency no	Competency	Domain	T-L Method	Teaching Hrs
1	MICR201:III SEM1.1	• Identification of Hospitalacquiredinfection	K,S	Demonstration ExperientialLearning through visual	2 hrs
2	MICR201:III SEM2.1	Identify the typesofisolationsystem,standardprecaution and transmission-basedprecautions (Direct Contact,Droplet, Indirect)	KS	Demonstration &Re-demonstration	3 hrs
3	MICR201:III SEM2.2	Demonstrateappropriate useof differenttypes of PPEsand the criticaluse of riskassessment	K,S	Lecture Demonstration &Re-demonstration	1hrs
4	MICR201:III SEM3.1	Demonstrate thehand hygienepractice and itseffectiveness oninfectioncontrol	K,S	Lecture Demonstration &Re-demonstration	2 hrs
5	MICR201:III SEM4.1	Disinfectionandsterilization	K,S	Experientiallearning throughvisit	2 hrs
6	MICR201:III SEM6.1	• Wastemanagementprocessandinfectionprevention • Staffprecautions • Laundrymanagement	K,S	Experientiallearning throughvisit	2 hrs
7	MICR201:III SEM8.1	Identify the patient safety indicatorsfollowed in ahealth careorganization • CareofVulnerablepatients • Preventionof Iatrogenicinjury • Careoflines, drainsandtubing‘s	K,S	Demonstration/Experientialle arning throughvisit	5 hrs
		• Blood&blood transfusionpolicy • PreventionofIVComplication • PreventionofFall • PreventionofDVT • Shiftingandtransportingofpatients • Surgicalsafety	K,S	Demonstration/Experientialle arning throughvisit	

8	MICR201:III SEM10.1	• Radiationsafety • Lasersafety - Firesafety, Firefightingequipment	K,S	Demonstration/Experientialle arning	03

Modified Tutorials (04 Hours)

Sr. No	**Comp. no**	**TOPIC**	Domain	T-L Method	Teaching Hrs
SECTION A					
1.	MICR201:III SEM2.1	Structureandclassificationof Microbes Morphologicaltypes, Sizeandformofbacteria	K,S	Tutorials	1 hour
2.	MICR201:III SEM2.6	Culture media	K,S	Tutorials	1 hour
	SECTION B				
1	MICR201:III SEM1.1	Hospital acquired infection	K,S	Tutorials	1 hour
2	MICR201:III SEM6.1	Biomedical waste management	K,S	Tutorials	1 hour

Theory

Continuous Assessment: 10Marks

Section A

Sr. No	Assignments	Percentage of Attendance required	Allotted marks	Total Marks for attendance
1	Attendance	95-100%	2	2 marks
		90-94%	1.5	
		85-89%	1	
		80-84%	0.5	
		<80%	0	
		Number of assignments required	Marks	Total Marks allotted
2.i	Home Assignment	1	1X10	10
3.i	Seminar/Individual presentation/Microteaching	1	1x12	12
4	Group work/Work/Report-Models	1	1x6	6
			Total	30/3=10Marks 10/2=5Marks

Section B

Sr. No	Assignments	Percentage of Attendance required	Allotted marks	Total Marks for attendance
1	Attendance	95-100%	2	2 marks
		90-94%	1.5	
		85-89%	1	
		80-84%	0.5	
		<80%	0	
		Number of assignments required	Marks	Total Marks allotted
2.i	Home Assignment	1	1X10	10
3.i	Seminar/Individual presentation/Microteaching	1	1x12	12
4	Group work/Work/Report-Models	1	1x6	6
			Total	30/3=10Marks 10/2=5Marks

Formative Assessment Section A

1**. Sessional Examinations: Theory: I**

Name of the Institute: SRMM College of Nursing
Name of Examination: Third Semester B.Sc. Nursing
Semester III/ Sessional -I: Applied Microbiology
MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks=30
Essay type (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(3) 2/ 3	(2) Level I-1 Level II-1	(1) Level I-1		5Mx2=10M
Very Short (4) 3/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-I-1	2Mx3=6M
MCQ (4) 4/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-1	1Mx4=4M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total =30**

2. Sessional Examinations: Theory: II

Name of the Institute: SRMM College of Nursing

Name of Examination: Third Semester B.Sc. Nursing

Semester III/ Sessional -II: Applied Microbiology

MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks= 37
Essay (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	5Mx3=15M
Very short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	2Mx3=6M
MCQ (6) 6/6	(3) Level-I-2 Level-II-1	(2) Level-I-1 Level-II-1	(1) Level-I-1	1Mx6=6M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total = 37 Marks**

3. Summative Assessment

Name of the Institute: SRMM College of Nursing

Name of Examination: Third Semester B.Sc. Nursing

Semester III/ University Exam: Applied Microbiology

MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks= 37
Essay (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	5Mx3=15M
Very short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	2Mx3=6M
MCQ (6) 6/6	(3) Level-I-2 Level-II-1	(2) Level-I-1 Level-II-1	(1) Level-I-1	1Mx6=6M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total = 37 Marks**

Section B InfectionControlincluding Safety

Name of the Institute: SRMM College of Nursing
Name of Examination: Third Semester B.Sc. Nursing
Semester III/ Sessional -I: Infection Control including Safety
MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks=30
Essay type (2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(3) 2/ 3	(2) Level I-1 Level II-1	(1) Level I-1		5Mx2=10M
Very Short (4) 3/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-I-1	2Mx3=6M
MCQ (4) 4/4	(2) Level I-1 Level II-1	(1) Level I-1	(1) Level-1	1Mx4=4M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total =30**

Name of the Institute: SRMM College of Nursing
Name of Examination: Third Semesterc B.Sc. Nursing

Semester III/ Sessional -II: Infection Control including Safety

MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks = 38
Essay(2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	5Mx3=15M
Very Short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	2Mx3=6M
MCQ (7) 7/7	(4) Level-I-3 Level-II-1	(2) Level-I-1 Level-II-1	(1) Level-I-1	1Mx7=7M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total = 38 Marks**

Summative Assessment

Name of the Institute: SRMM College of Nursing
Name of Examination: Third Semester B.Sc. Nursing

Semester III/ University Exam: Infection Control including Safety

MICR201:III -SEM/Primary/2021-2025

	Must to Know (MK)	Desirable to know (DK)	Nice to know (NK)	Marks = 38
Essay(2) 1/2	(2) Level-I-1 Level-II-1			10Mx1=10M
Short(4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	5Mx3=15M
Very Short (4) 3/4	(2) Level-I-1 Level-II-1	(1) Level-I-1	(1) Level-I-1	2Mx3=6M
MCQ (7) 7/7	(4) Level-I-3 Level-II-1	(2) Level-I-1 Level-II-1	(1) Level-I-1	1Mx7=7M
About 60:30:10 (MK:DK:NK) Level of Learning 80:20				**Total = 38 Marks**

RECOMMENDED BOOKS:

- Alice corraine: Microbiology and pathology 9th edition
- Bernard D Davis, Remap Dalbecco Herman N.
- Eisen and Harold S Ginsberg 'Microbiology'
- P. Ananthanarayan CK. Jayarmpanikar Textbook of microbiology 8th edition.
- Chakravati Textbook of microbiology.
- CP Baweja textbook of microbiology for nurses