Resource pool

Prof F. Noordeen	- Microbiology
Dr. C. Gamage	- Microbiology
Dr N. Dissanayake	- Microbiology (Module Cordinator)
Dr V. Liyanapathirana	- Microbiology
Dr C. Ratnatunga	- Microbiology
Dr. A. Thennegedara	- Microbiology
Prof D. Iddawella	- Parasitology(Head/Parasitology)
Prof S. Wickramasinghe	- Parasitology
Dr R. Morel	- Parasitology
Dr D. Attapattu	- Parasitology

Summary of Teaching/ Learning activity and evaluation

Lectures (h)	SGDs to include CCRs (h)	Seminars (h)	
17	11	2	
Total per student lecture equivalent = 30 = 2 Credits			
Examination	**Mode of Evaluation**	**% Marks**	**Time (h)**
Infection 2	MCQ	50	1
	SAQ	50	1
		100	2
Total per student evaluation = 2h = 2 Credits			

- **Examination 2 hours - Integrated clinically oriented questions on infectious diseases of medical importance.**

Infection 2 (Clinical Microbiology and Parasitology) Year 3 Semester 2

2 Credit Course **2 hours per afternoon on a fixed day**

Topic/ concept		Time	Teaching/ learning activity	Department
Clinical microbiology and parasitology				
The pathogenesis of infections at different body sites and principles of diagnosis, treatment and prevention				
1. Summary of aetiological agents	1) Recall of principles and summary of important content in Infection-1 Foundation in Pharm -Antimicrobials	1h	Lecture	Microbiology
2. Use of antimicrobials		2h	Lecture	Microbiology
3. As applied to urinary tract infections	Be able to 1) Explain the pathogenesis of uncomplicated and complicated urinary tract infections 2) Explain the principles underlying microbiological diagnosis of UTI 3) Evaluate the methods of collection and transport of urine for culture and ABST 4) Interpret Urine culture and ABST reports 5) Strategize the methods of treatment and prevention of UTI	1 h	Lecture	Microbiology
4. As applied to skin and soft tissue infections and musculoskeletal infections	Be able to 1) Describe the risk factors for skin and soft tissue infections and musculosketal infections 2) Describe the types of surgical wounds 3) Evaluate the methods of collection and transport of samples for microbiological diagnosis of skin and soft tissue infections and musculosketal infections and interpret the culture and ABST reports 4) Strategize the methods of treatment and prevention of skin and soft tissue infections and and musculosketal infections	1 h	Lecture	Microbiology

5. Leishmaniasis and scabies	Be able to 1) Name the parasite(s) causing human leishmaniasis in SL 2) Name the genus of the arthropods transmitting human leishmaniasis in SL 3) Describe the breeding habitats of the vectors. 4) Describe the pathological & clinical consequences relating to infection with this parasite (in SL) 5) Outline the management of cutaneous leishmaniasis (in SL) naming the anti-leishmania drugs currently used. 6) Name the infective agent/s causing scabies in humans 7) Outline the life cycle 8) Describe pathological & clinical consequences of infection caused by this organism 9) State the principles underlying the prevention and control of scabies 10) Name the drug(s) used in the treatment	1 h	Lecture	Parasitology
6. As applied to respiratory system	Be able to 1) List the infections which occur in the respiratory tract and associated organs 2) State the most likely organisms associated with infections at each site 3) Revisit the sources and virulent factors associated with pathogens causing respiratory tract infections 4) Evaluate the specimen (including mode of collection and transport) and diagnostic tests used to determine the aetiology of infections of the respiratory tract and interpret the laboratory reports 5) Evaluate the use of antimicrobials in respiratory tract infections 6) Evaluate the methods of preventing respiratory tract infections	1 h	Lecture	Microbiology
7. As applied to cardio vascular system and sepsis	Be able to 1) State the risk factors for infective endocarditis 2) Describe the pathogenesis of infective endocarditis 3) List the important pathogens and factors which contribute to these organisms causing infective endocarditis 4) Discuss how the pathogenesis of infective endocarditis contributes to the symptoms and signs of the disease and in selection of diagnostic tests 5) Describe the sample collection and interpretation of reports of microbiological investigations in relation to infective endocarditis Be able to 6) Define bacteraemia, septicaemia and sepsis syndrome 7) Describe laboratory diagnosis of bacteramia including collection, processing and reporting of appropriate specimen 8) Identify the sources of bacteremia and sepsis 9) Describe the pathogenesis of sepsis	1 h	Lecture	Microbiology

	10) Describe the principles of management of sepsis 11) Discuss the pathogenesis of management of device related infections 12) Discuss the infective aetiologies, diagnosis and management of PUO to include typhoid			
8. As applied to gastro intestinal tract: Infective diarrhoeas (parasitic, viral and bacterial) and food poisoning	Be able to 1) List the causes of infective diarrhea and food poisoning 2) Describe the pathogenesis of infective diarrhoeas 3) Describe the pathological and clinical consequences of infection. 4) State the principles underlying the prevention and the control of parasitic diarrhoea. 5) Name the drugs used against these protozoa 6) Evaluate the methods of diagnosis of infective diarrhoea and food poisoning 7) Outline key methods in prevention of diarrhea and food poisoning	1h	SGD	Microbiology and Parasitology
9. As applied to the CNS	Be able to 1) List normal protective measures of CNS 2) Discuss the methods of invasion of CNS by pathogens and pathogenesis of CNS infections (meningitis, encephalitis, encephalopathies, prion disease and brain abscesses) 3) Describe different types of meningitis 4) Describe different types of encephalitis and encephalopathies 5) Describe the specimen (including mode of collection and transport) and diagnostic tests used to determine the aetiology of meningitis and encephalitis and interpret laboratory reports 1. Describe the principles of treatment and prevention of meningitis and encephalitis	1 h	Lecture	Microbiology
10. Current Trends in Clinical Parasitology	Be able to 1) List the important changes occuring in parasitic diseases in Sri Lanka 2) Describe the pathological and clinical consequences of the diseases listed in 1) 3) Describe the principles of management including prevention and the control of the diseases listed in 1)	2 h	SGD	Parasitology
11. As applied to infections in pregnancy, foetus and neonate to include *Toxoplasma gondii*	Be able to 1) List the common infections in pregnancy that may affect the pregnancy outcomes and recall their impact on the foetus Viral infections affected featus (Chickenpox, rubella, parvovirus B19, CMV, Herpes simplex, HIV, Hepatitis B, Zika virus) Bacterial infections – Listeria, Syphilus	1h	Lecture	Microbiology

	Parasitic – Toxoplasmosis 2) Discuss the concept of TORCH screening 3) List and explain the importance of other infections in pregnancy Influenza, chorioamnionitis, UTI 4) Neonatal sepsis Explain the pathogenesis of early and late onset neonatal sepsis Describe the laboratory investigations used to identify the aetiology of neonatal sepsis			
12. Molecular diagnosis of infective disease *(viral, bacterial, fungal and parasitic)	Be able to 1) Describe the basis of molecular diagnosis 2) Discuss the role of molecular methods in diagnosis of infective disease	1 h	Lecture	Microbiology
13. Case scenarios – typhoid, fever and rash, post operative fever	Discuss the case scenarios given using microbiological concepts	1h	SGD	Microbiology
14. Role of the laboratory in diagnosis of infective diseases	Be able to 1) List the common investigations that aid the diagnosis of infective diseases 2) Discuss the concepts of sensitivity, specificity, positive predictive value and negative predictive value and apply them to common tests	1 h	Lecture	Microbiology
15. As applied to infections of the compromised host to include AIDS	Be able to 1) Explain the transmission and pathogenesis of HIV infection and AIDS 2) List the common opportunistic infections which occur in AIDS and the principles of diagnosis of these infections 3) Describe the principles of prevention of HIV infection and the progression to AIDS 4) Distinguish immunocompromised Vs compromised 5) know common scenarios where patients are compromised, identity the compromised status, know the common organisms associated with the given compromised situation, know how to diagnose these conditions and discuss the preventive strategies for them	1 h	Lecture	Microbiology
16. Emerging and reemerging infections and zoonotic diseases	Be able to 1) Define emerging and re-emerging infections 2) List the emerging and re-emerging infections in Sri Lanka and worldwide 3) Describe the factors which pre-dispose to emergence and re-emergence of infections 4) Recognize the current handicaps when dealing with the risks of these infections. 5) Describe the prevention and control of these infections.	1 h	SGD	Microbiology and Parasitology

	Be able to 6) Define zoonoses and name the zoonotic diseases commonly reported in Sri Lanka 7) State the causative agent, mode(s) of transmission and diagnosis, of these zoonotic diseases 8) Describe the factors influencing incidence and prevalence of zoonotic infections 9) Discuss the principles of surveillance, prevention, control and elimination of zoonotic infections			
17. Malaria	Be able to 1) Name the parasites causing human malaria (recall) Revisit the life cycle of *Plasmodium* species 2) Describe the pathological and clinical consequences of the erythrocytic cycle including relapse and recrudescence 3) Name the anti-malarial drugs Discuss how the epidemiology of malaria in Sri Lanka and worldwide affects the control measures taken to prevent re-emergence of malaria in Sri Lanka	1h	Lecture	Parasitology
18. Lymphatic and subcutaneous filariasis (dirofilariasis)	Be able to 1) Describe the pathogenesis and clinical features 2) Describe the laboratory methods of diagnosis of lymphatic filariaisis (recall) 3) State the principles of management 4) Describe the preventive and control measures used in the National Filariasis Control Programme in Sri Lanka	1 h	Lecture	Parasitology
19. Collection and transport of specimen for common microbiological investigations	1) Discuss the principles of collection and trans port of specimen for common microbiological investigations Be able to 1) Collect proper samples for 2) Arrange for proper transport 3) Interpret Common microbiological tests	1h + 1 h	Lecture SGD	Microbiology Microbiology and parasitology
20. Case reports of infective diseases	Be able to 1. Read and understand a given article/ case report on an infectious disease and become familiar with the structure of such a report 2. Identify and present the salient facts 3. Discuss the presentation, clinical features, investigation and management of the case with relevance to knowledge gained so far. 4. Skills of summarizing, making slide, presenting to an audience, keeping to time etc. 5. Application of knowledge gained in the wards and incorporation with theory knowledge.	2h	Seminar	Microbiology and Parasitology

21. Hospital acquired infections	**Be able to** **1. Define the terms hospital acquired infections and healthcare associated infections** **2. Describe the risk factors for HAIs to include UTIs, HAP/VAP, line infections,** **3. surgical site infections, etc** **4. Describe common pathogens responsible for HAIs** **5. To describe the principals of management of common HAIs considering risk of infections with antibiotic resistant organisms**	1h + 1h	Lecture SGD	Microbiology
22. Prevention of spread of infections	**Be able** **1. To describe methods of transmission of infections in healthcare settings** **2. To describe common measures put in place in healthcare settings to prevent spread of infections to include standard precautions** **3. To recall the 5 movements of hand hygiene and the process of performing hand hygiene** **4. To discuss appropriate infection control measures to prevent outbreaks of infectious diseases in healthcare settings**	1h + 1h	Lecture SGD	Microbiology
23. Sexually transmitted infections	**Be able to** **1) Recall common STIs and their causative organisms** **2) Describe the appropriate use of laboratory tests in diagnosis of STIs (Gonorrhoea, syphilis, non-gonococcal urethritis)** **3) Describe the principles of managing STIs to include treatment and prevention**	1h	Lecture	Microbiology
24. MCQ session		1 h	SGD	Microbiology and Parasitology
25. SAQ session		2 h	SGD	Microbiology and Parasitology

Infection 2 (Clinical Microbiology and Parasitology) Year 3 Semester 2

2 Credit Course **2 hours per afternoon on a fixed day**

Total Per/Student Hours – Infection 2=30 h;	**Number of Credits = 02**