

University of Diyala – College of Medicine 2022-2023

Subject	Hours / week			Credits
	Theory	Practical	Seminars, tutorials	
Pharmacology	90	90		9
Microbiology	75	60	15	7
parasitology	45 60 15	60	15	6
	45 60	60		5
Surgery 30 2	30	2		2
Community and family medicine 30 30 3	30	30		3
Pathology 60 60 6	60	60		6
Immunology	35	30	10	4
Total	410	390	40	42

1. Introduction to immune system
2. Innate (Nonspecific) and specific immune response
3. Antigens
4. Complement system
5. Immunoglobulins: Structure and Function
6. Immunoglobulins: Isotypes, Allotypes and Idiotypes
7. Immunoglobulins: Genetics
8. Immunoglobulins: Ag-Ab Reactions and Selected Tests
9. Antibody Formation
10. Immunization
11. Immune cells and Ag Recognition
12. MHC and T cell receptors
13. Ag processing and presentation
14. Cell-cell interactions in immune responses (part 2)
15. Immunoregulation
16. Tolerance
17. Autoimmunity
18. Hypersensitivity reactions (part 1)
19. Hypersensitivity reactions (part 2)
20. Tumor Immunology (part 1)
21. Tumor Immunology (part 1)
22. Immunodeficiency (part 1)
23. Immunodeficiency (part 1)
24. Covid-19
- 19 immunovirology

الكورس الدراسي الاول Protozoology

Practical	Theory	الاسبوع
Introduction of practical / diagnostic parasite	Introduction , Basic principle &concept: Host-parasite relationships	1
Identification of parasitic infections by direct and indirect method	Classification of parasites	2
<i>Entamoeba histolytica</i> (Trophozoite&cyst stage) slides Morphology, lifecycle , lab. diagnosis	<i>Entamoeba histolytica</i> (Trophozoite&cyst stage) morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	3
<i>E. coli</i> , <i>Endolimax nana</i> & <i>Iodamoeba butschlii</i>) slides Morphology, lifecycle , lab. diagnosis	<i>E. coli</i> , <i>E. nana</i> and <i>Iodamoeba butschlii</i>) morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment, Non – pathogenic commensals, free-living ameba as pathogen	4
<i>Giardia lamblia</i> , <i>Chilomastix mesnili</i> , <i>Trichomonas vaginalis</i> (Morphology, lifecycle , lab.diagnosis)	<i>Giardia lamblia</i> , <i>Chilomastix mesnili</i> , <i>Trichomonas vaginalis</i> morphology, lifecycle, diagnosis,pathogenesis	5
<i>Leishmania donovani</i> , <i>Leishmania tropica</i> , <i>L. brasiliensis</i> & <i>Trypanosoma cruzi</i> (Morphology, lifecycle , lab. diagnosis)	<i>Leshmania</i> types and <i>Trypanosoma cruzi</i> morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	6
Ciliate: <i>Balantidium coli</i> slides (Morphology, lifecycle, lab.Diagnosis)	Ciliate: <i>Balantidium coli</i> , morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	7
<i>Plasmodium vivax</i> , <i>P. ovale</i> , <i>P. falciparum</i> & <i>P. malariae</i> (Morphology, lifecycle , lab.Diagnosis)	<i>plasmodium vivax</i> , <i>P. ovale</i> <i>P.falciparum</i> , <i>P.malariae</i> morphology, lifecycle, diagnosis, pathogenesis,clinical signs, treatment	8
<i>P. falciparum</i> & <i>P. malariae</i> (Morphology, lifecycle , lab.Diagnosis)	<i>P.falciparum</i> , <i>P.malariae</i> morphology, lifecycle, diagnosis, pathogenesis,clinical signs, treatment	9
<i>Toxoplasma gondii</i> Morphology, lifecycle , lab. Diagnosis)	<i>Toxoplasma gondii</i> , morphology, lifecycle, diagnosis, pathogenesis,clinical signs, treatment	10
<i>Cryptosporidium</i> (Morphology, lifecycle , lab. Diagnosis)	<i>Cryptosporidium</i> , morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	11

Isospora (Morphology, lifecycle , lab. Diagnosis)	<i>Isospora</i> , morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	12
sarcocystis(Morphology, lifecycle , lab. Diagnosis)	<i>sarcocystis</i> morphology, lifecycle, diagnosis, pathogenesis, clinical signs, treatment	13
Review of slides	Immunity against parasitic infection	14
Review of slides	Vaccine against parasitic infection	15

الكورس الدراسي الثاني Helminthology

المادة العملية	المادة النظرية	الأسبوع
-Cestoda: Diphylobothrium latum , Taenia saginata and T. solium Morphology, lifecycle , lab. Diagnosis	Cestoda: Diphylobothrium latum , Taenia saginata and T.solium morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	1
- <i>Echinococcus granulosus</i> and <i>Echinococcus multilocularis</i> (Morphology, lifecycle , lab. Diagnosis)	<i>Echinococcus granulosus</i> and <i>E.multilocularis</i> morphology, lifecycle, diagnosis, pathogenesis, clinical signs, treatment	2
<i>Hymenolepis nana</i> , <i>H. diminuta</i> & <i>Dipylidium caninum</i> (Morphology, lifecycle , lab. Diagnosis)	<i>Hymenolepis nana</i> , <i>H.diminuta</i> and <i>Dipylidiumcaninum</i> , morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	3
<i>Fasciola hepatica</i> , <i>Clonorchis sinensis</i> (Morphology,lifecycle , lab.Diagnosis)	Liver flukes , morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	4
<i>Fasciolopsis buski</i> & <i>Heterophyes heterophyes</i> . <i>Paragonimus westermani</i> (Morphology, lifecycle, lab.Diagnosis)	Intestinal flukes & lung flukes morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	5
<i>Schistosoma</i> spp. (Morphology, lifecycle , lab. Diagnosis)	Blood flukes & lung flukes morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	6
<i>Ascaris lumbricoides</i> & <i>Enterobius vermicularis</i> ,Morphology, lifecycle , lab. Diagnosis	<i>Ascaris lumbricoides</i> and <i>Enterobius vermicularis</i> morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	7

<i>Trichinella spiralis</i> & <i>Trichuris trichiura</i> and <i>Strongyloides stercoralis</i> (Morphology, lifecycle , lab. Diagnosis	Trichinella spiralis ,Trichuris trichiura and Strogyloidesstercoralis morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	8
<i>Ancylostoma duodenale</i> & <i>Necator americanus</i> ,Morphology, lifecycle , lab. Diagnosis	Ancylostoma duodenale and Necator americanus morphology, lifecycle, diagnosis, pathogenesis,clinical signs,treatment	9
<i>Wuchereria bancrofti</i> , <i>loa loa</i> & <i>Onchocerca volvulus</i> (Morphology, lifecycle , lab. Diagnosis	Wuchereria bancrofti, <i>loa loa</i> and <i>Onchocerca volvulus</i> morphology, lifecycle, diagnosis,pathogenesis	10
Anopheles : mouth parts, larva, egg, male and female	Anopheles, Gulex: morphology, lifecycle, types of disease transmitted	11
Gules mouth parts, larva, egg,male and female	Phlebotomus papatasii: morphology, lifecycle, types of disease transmitted	12
<i>Phlebotomus papatasii</i> male,female& <i>Sarcoptes scabiei</i> male,female	Sarcoptes scabiei: morphology, lifecycle, types of disease transmitted	13
Hard tick ,male, female, larva	Hard tick, Cyclops of soft tick, morphology, lifecycle, types of disease transmitted	14
soft tick adult, larva , Cyclops	Soft ticks, morphology, lifecycle, types of disease transmitted	15

Microbiology Syllabus

- Introduction to microbiology
- Cell structure
- Growth and metabolism
- Bacterial genetics
- Pathogenesis of bacterial diseases
- Normal flora
- Antimicrobial agents and resistance
- Staphylococci • Streptococci
- Gram negative cocci, Neisseria species
- Gram positive non-spore forming bacilli, Corynebacterium diphtheria, Listeria monocyogenes

- Gram positive aerobic spore forming bacilli, Bacillus anthracis, B.subtilis, B. cereus
- Gram negative spore forming bacilli, Clostridia species
- Gram negative bacilli, Salmonella, Shigella species
- Gram negative enteric bacilli,
- Proteus species, Pseudomonas
- Gram negative bacilli, Vibrio Cholera
- Gram negative bacilli, Compylobacter, H.pylori
- Gram negative bacilli, H. influenza species
- Gram negative bacilli, Brucella species
- Gram negative bacilli, Yersinia species
- Gram negative bacilli, Bordetella species
- Mycobacterium tuberculosis
- Other mycobacterium species, Spirochetes, Mycoplasma
- Actinomyces, Rickettsia, Chlamydia

• **Introduction to Mycology**

- The molds, classifications, species types, medical important types, pathogenesis
- The Yeast, classifications, the medical important types, pathogenesis, diseases caused by the yeast
- Antifungal types

• **Introduction about virology**

- Viral replication, DNA and RNA viruses
- Pathogenesis and host defenses
- Antiviral chemotherapy
- Viral vaccine
- Orthomyxoviruses
- Parainfluenza and Respiratory syncytial virus
- Measles and Mumps viruses
- Togavirus (rubella virus)
- Rhabdoviruses (rabies)

- Corona viruses and SARS 22
- Picorna viruses, poliovirus, coxsackey
- Enteroviruses and Echovirus
- Rinoviruses and human rotavirus
- Retroviruses
- Viral hepatitis (HAV, HBV, HCV, HDV,HEV)
- Herpesviruses, HSV type 1 and 2,
- Human cytomegalovirus, Varicella-zoster virus
- EBV and Human herpes virus type-8 (Kaposi's sarcoma)
- Poxvirus and Molluscum
- Adenoviruses
- Papovaviruses (HPV) Human polyoma virus
- Human parvovirus B19
- Arthropod-borne viral infectio