**Course Description Form**

| 1. Course Name: | | |
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| Microbiology II | | |
| 1. Course Code: | | |
| ClMv224/2 | | |
| 1. Semester / Year: | | |
| 2/2 | | |
| 1. Description Preparation Date: | | |
| 29/2/2024 | | |
| 1. Available Attendance Forms: | | |
| In person attendance | | |
| 1. Number of Credit Hours (Total) / Number of Units (Total) | | |
| 5/3 | | |
| 1. Course administrator's name (mention all, if more than one name) | | |
| | assist. prof. Dr.Zainab Majeed Hashim | zainab.atyia@copharm.uobaghdad.edu.iq |  | | --- | --- | --- | | lecturer Dr.: Khalid Abdul-Hussain | khaled.abd@copharm.uobaghdad.edu.iq |  | | lecturer Dr.: Shaymaa Abdul-Zahra | shaymaa.abbas@copharm.uobaghdad.edu.iq |  | | Lecturer Dr. Ali S. Salman | ali.salman@copharm.uobaghdad.edu.iq |  | | Assist. lecturer Muhammad Hasan Muhammad | muhammad.h@copharm.uobaghdad.edu.iq |  | | Wasan G. Hussein | wasn.hussein@copharm.uobaghdad.edu.iq |  | | | |
| 1. Course Objectives | | |
| **Course Objectives** | * Providing students with good information in the field of diagnosis of parasites, parasitic diseases and their vectors. * Improving students’ ability to self-learn, use the Internet, and access accurate scientific information. * Preparing students to be an efficient source with a solid scientific basis for community guidance. | |
| 1. Teaching and Learning Strategies | | |
| **Strategy** | Lectures  Tutorials  Google class room  Researches | |
| 1. Course Structure | | |
| | Week | Hours | Required Learning Outcomes | Unit | Learning method | Evaluation method | | --- | --- | --- | --- | --- | --- | | 1 | 2 | Introduction to parasites that  infect humans and their classification  practical: Fixed stained  slides, microscopic  examination, examination of  laboratory models, and presentation of photographic slides | Introduction to Parasitology | Lectures, Discussions, and Reports | Exam and classroom activities | | 1 | innate immunity and describe the  most important physical and  chemical immune barriers, also  clarify the immediate and induced  immune response | Innate immunity | | 2 | 1 | Description of the pathogenic  amoeba (Entamoeba histolytica)  practical: fixed slides for pathogenic  and non-pathogenic amoeba+ presentation of photographic slides using data-show | Pathogenic amoeba | = | = | | 1 | introduction to viruses, viral shape  and size | Introduction to Virology | | 1 | Cytokines definition, families and function | Immunology/ Cytokines | | 3 | 2 | Description of gastrointestinal and reproductive systems, tissue flagellates, and ciliates  Practical: fixed slides for flagellate  + presentation of photographic slides using data-show | Human parasitic flagellates | = | = | | 1 | Adaptive immune response. T and B cells and its functions | Specific immune response | | 4 | 1 | Malaria: life cycle and pathogenesis  Practical: fixed slides for plasmodium+ presentation of photographic slides using data-show | Parasite/ malaria | = | = | | 1 | Structure of viruses, including the basic unit of infection, the gene, the outer envelope, and its functions | Structure of viruses | | 1 | Integration of the immune response with both non-specialized and specialized responses | Immune response | | 5 | 2 | Comparison between different types of malaria and toxoplasmosis  Practical: fixed slides for plasmodium and toxoplasma  + presentation of photographic slides using data-show | Blood flagellate | = | = | | 1 | Basic structure of Abs, their function and types | Antibodies | | 6 | 1 | Tapeworms, their life cycle and pathogenesis  Practical: fixed slides for tapworms  + presentation of photographic slides using data-show | Parasite/ tapeworms | = | = | | 1 | Describe the different stages of virus reproduction and the accompanying structures produced during replication cycle | Viral reproduction | | 1 | Definition of hypersensitivity, its types, and the mechanisms that lead to type 1 and type 2 hypersensitivity | Hypersensitivity reactions | | 7 | Mid-term examination | | | | | | 8 | 1 | Tapeworms in pigs and tapeworms in cows / continue  Practical: fixed slides for tapworms: T saginata (beef tapeworm), T. solium (pork tapeworm) and cyct + presentation of photographic slides using data-show | Parasite/ tapeworms | = | = | | 1 | One-step growth curve, methods of isolating viruses, and studying the most important genetic mutations | Growth curve and gene interaction in viruses | | 1 | Mechanics that lead to type III and IV hypersensitivity | Hypersensitivity reactions/ continue | | 9 | 2 | Dwarf tapeworms  Practical: fixed slides for dwarf worm + presentation of photographic slides using data-show | Parasite/ tape worms | = | = | | 1 | Definition of tumors, their causes, and the mechanisms that contribute to the growth of tumors | Tumor immunity | | 10 | 1 | Blood and urinary schistosomiasis, their classification, forms, life cycle, pathology, diagnosis and treatment  Practical: fixed slides for egg of Schistosoma and larva + presentation of photographic slides using data-show | Parasite/ schistosomiasis | = | = | | 1 | A description of the most DNA viruses, important families pathogenic to humans, along with a description of the most important diseases they cause and methods of diagnosis and treatment. | DNA viruses | | 1 | How the tumor evades the immune response, as well as the most important immune strategies used in treatments | Tumor immunity/ continue | | 11 | 2 | Ascaris nematodes and hookworms, their description, shapes, life cycle  Practical: fixed slides for egg of egg of Ascaris and larva + presentation of photographic slides using data-show | Parasites/ nematodes | = | = | | 1 | Tolerance and autoantigens | Autoimmunity | | 12 | 1 | Ascaris nematodes and hookworms, Diseases, diagnostic methods and treatments  Practical: fixed slides for egg of egg of Ascaris and larva + presentation of photographic slides using data-show | Parasites/ nematodes continue | = | = | | 1 | Description of RNA viruses, the most important pathogenic families for humans, along with a description of the most important diseases they cause and methods of diagnosing and treating them. | RNA viruses | | 1 | Mechanical damage associated with breakdown of tolerance and the presence of autoantibodies | autoantibodies | | 13 | 3 | Pinworms and roundworms, their forms, life cycle, pathology, diagnostic methods and treatments  Practical: fixed slides for egg of egg of pinworms and roundworms + presentation of photographic slides using data-show | Pinworms and roundworms | = | = | | 14 | 2 | Diseases caused by free-living worms  Practical: presentation of photographic slides using data-show for free living worms | Parasite/free living worms | = | = | | 1 | Description of RNA viruses, the most important pathogenic families for humans, along with a description of the most important diseases they cause and methods of diagnosing and treating them | RNA viruses/ continue | | 15 | 3 | Elephantiasis and Trachnella worms, their forms, life cycle, pathology, diagnostic methods and treatments  Practical: presentation of photographic slides using data-show for Wuchereria bancrofti and Trachnella worms | Wuchereria bancrofti and Trachnella worms | = | = | | | |
| 1. Course Evaluation | | |
| Mid-term examination (15 marks)  Quiz and homework (5 marks)  Practical work (20 marks)  Final examination (60 marks) | | |
| 1. Learning and Teaching Resources | | |
| Required textbooks (curricular books, if any) | | -Medical Microbiology 24th ed. 2007 by E. Jawetz  - Medical parasitology, 5th ed. By  Dr. D.R. Arora & Dr. Brij Bala Arora.  2018  - Lab manual for practical virology  and parasitology, - Atlas of  Helminthes and Protozoa.ed. |
| Main references (sources) | |  |
| Recommended books and references (scientific journals, reports...) | |  |
| Electronic References, Websites | |  |