



Paramedical Program

Specialization	Medical Laboratories
Course Number	21107281
Course Title	Medical parasitology
Credit Hours	(3)
Theoretical Hours	(2)
Practical Hours	(3)



Brief Course Description:

This course deals with the most common life style on earth: (parasitism) It is a broad survey of parasites of humans, domestic and wild animals, and marine organisms. It deals with major topics include ecological and evolutionary aspects of parasite-host interactions with emphasis on life cycles, anatomy and physiology of parasites, and immunological, pathological and clinical responses of hosts to parasitic infection. Moreover, it discusses the treatment and control of parasites.

Course Objectives:

Upon the completion of the course, the student should be able to:

- 1) Will have an awareness of the diversity of parasites (as expressed in their structure, physiology, life cycles and development) and their potential to cause disease and economic loss
- 2) To understand co-evolutionary adaptations of parasites and their hosts
- 3) To understand the ecological, biological and behavioral aspects of parasitism.
- 4) To recognize the epidemiology and role of parasitic disease on human life and history.
- 5) Be aware of attempts and strategies to control parasites world wide.
- 6) Learn and understanding of basic biological principles and application of the scientific method.
- 7) Will be encouraged to appreciate science and nature as God's grace and goodness revealed.



Detailed Course Description:

Unit Number	Unit Name	Unit Content	Time Needed
1	Introduction	-Introduction - parasitism, principles and concepts. -Classification.	
2	protozoa	-Definition of terms, and the pathogenic amoeba: <i>Entamoeba histolytica</i> -The non pathogenic amoeba: i.e., <i>Entamoeba hartmanni</i> , <i>Entamoeba coli</i> , <i>Entamoeba boski</i> . -The flagellates (<i>Giardia lamblia</i> , <i>Chilomastix mesneli</i> , <i>Trichomonas hominis</i> , <i>T. vaginalis</i>). -The ciliates (<i>Balantidium coli</i>) -The intestinal coccidia (<i>Isospora</i> , <i>Cryptosporidium</i>) -The apicomplexa or sporozoa (<i>Plasmodia</i> spp.). -The blood and tissue dwelling protozoa -The hemoflagellates (<i>Trypanosoma</i> & <i>Leishmania</i> spp.) -The coccidia (<i>Toxoplasma gondii</i> & <i>Sarcocystis</i>) -The opportunistic amoeba (<i>Naegleria</i> & <i>Acanthamoeba</i>)	
3	Helminthes	-The Trematodes: - Intestinal flukes a. <i>Fasciolopsis buski</i> b. <i>Echinostomes</i>	

		<p><i>c. Heterophyid heterophid</i></p> <p>-The liver flukes a. <i>Fasciola hepatica</i> b. <i>Clonorchis sinensis</i> c. <i>Opisthorchis</i> d. <i>Dicrocoelium dendriticum</i></p> <p>-The blood flukes a. <i>Schistosoma</i> spp.</p> <p>-The lung flukes: <i>Paragonimus westermani</i></p>	
4	The Cestodes	<p>-<i>Diphyllobothrium latum, Taenia</i> spp., -<i>Multiceps, Echinococcus granulosus, Dipylidium caninum</i> and <i>Hymenolepis</i> spp.</p>	
5	The Nematodes	<p>-The intestinal nematodes: <i>Ascaris lumbricoides, Enterobius vermicularis.</i></p> <p>- hook worms: <i>Ancylostoma & Necator, Strongyloides, Trichuris trichura,</i> guinea worm, <i>Trichinella spiralis .</i></p> <p>-blood and tissue nematodes the filariae</p>	
6	Arthropods and ectoparasites	<p>Classification, form and function, parasitic insects. Lice, Scabies, mosquitoes, flies.</p>	





Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Practical Exam	10%	--/--/----
	Final Exam	35%Theory 15%Practical	--/--/----

Teaching Methodology:

- ❖ Lectures
- ❖ Slides and posters
- ❖ Practice inside labs

Text Books & References:

Reference

1. Microbiology Richard Harvey, Pamela, Champe Bruce D. Fisher 2007 PP438
 2. Burton's Microbiology Paul Engel Kirk, Gwendolyn Buroon 2007 390PP.
 3. Microbiology, Geraral Tortora, Berdell Funke Christin Case 1000PP. 18JD 2007.
 4. Medical Microbiology and Immunology Warren Levinson. 660PP. 2006
 5. Microbiology Prescott Harley Kline Sixth edition 2005 Published by MC Graw. Hill Martin J. Lang.
 6. Microbiology PRESCOTT HARLEY KLINE Sixth edition 2005
 7. Published by MC Graw. Hill Martin J. Lang.
 8. Medical Microbiology .Geo. F Brooks Janet s. Butel Stephen A. Morse, 20th edition 2004
 9. Microbiology for the Health Sciences Gwendolyn R.W Burton paul G.Englkirk. .2004 Lippincott Williams & Wilkins.
- Medical Microbiology Cedric Mims, Hazel M Dockrem Richard V Goering. Ivan Ritt, Derek. Wakein, Mark Zuckerman 660PP 15JD

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