Kingdom of Saudi Arabia
Taibah University – Madinah
College of Applied Medical Sciences
Department of Clinical Laboratory Sciences

Medical Parasitology (MLT-324) 1437-1438H

A- Course Information:

Course Code	Course Title	Credit Units			Study Level	Pre-requisites
		Total	Theory	Practical		
MLT 324	Medical Parasitology	3	2	1	6th	MLT 222

Course Coordinator	Extension	Email Address
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B- Course Description:

This course starts with the description of the three types of parasites affecting humans, which arehelminths, protozoa and arthropods. The basic biology of these parasites, as well as the clinical manifestations of the diseases they cause, will be discussed. Life cycles, morphological features, host-parasite relationships, geographical distribution, reservoir hosts, methods of transmission and control, pathology, diagnosis and treatment will be covered. Practical sessions will focus on the identification and recognition of parasitic stages excreted in different human body fluids. The biological and clinical perspectives gained in this course will assist the students in the recognition, evaluation and management of public health problems caused by medically important parasites.

C- Course Objectives:

1. To describe the world distribution of important parasitic infections and the epidemiologic principles and the effect of social and demographic patterns on parasitic disease and vulnerability.
2. To demonstrate the common parasitic diseases and life-threatening conditions caused by helminths and protozoa as regards etiology and life cycles of parasites of medical importance.
3. To identify the common diseases caused by helminths and protozoa as regards pathogenesis, clinical features, differential diagnosis and complications.
4. To point out the different methods of recovery of parasites and their culture as well as immunological and molecular methods used for diagnosis of parasitic infections.
5. To define the principles of management for common parasitic diseases.
6. To identify the common diseases caused by arthropods of medical interest as regards etiology, pathogenesis, clinical features and methods of combat.
7. To outline methods of disease prevention and control.

D- THEORY TOPICS:		
Week	Theory Topic	Hours
1	Introduction to Parasitology Helminthology: Classification, liver flukes	2
2	Trematodes: Intestinal flukes, blood flukes	2
3	Cestodes: *Taenia spp., Diphyllobothriumlatum*	2
4	Cestodes: *Echinococcusgranulosus and Hymenolepis nana*	2
5	Nematodes: Intestinal: *Ascarislumbricoides, Trichuristrichiura, Enterobiusvermicularis*	2
6	Nematodes: Intestinal: *Ancylostomaduodenale, Strongyloidesstercoralis*	2
7	Nematodes: Intestinal: *Trichinellaspiralis, Capillariaphilippinensis,* Tissue:*Dracunculusmedinensis*	2
8	Tissue Nematodes: *Wuchereriabancrofti, Onchocerca volvulus*	2
9	Protozoa: Intestinal: *Entamoebahistolytica, E. coli, Balantidium coli, Giardia lamblia, Cryptosporidium parvum*	2
10	Protozoa: Urogenital: *Trichomonasvaginalis* Blood: *Plasmodium spp.*	2
11	Protozoa: Blood: *Leishmania, Trypanosoma*	2
12	Protozoa: Tissue: *Toxoplasma gondii*	1
13	Immune response in parasitic infections and immunodiagnosis	2
14	Introduction to medical entomology, Mosquitoes, flies, myiasis, Fleas, lice, bugs, ticks, mites and crustaciae (Cyclops)	3
15	Revision	2

E- PRACTICAL SESSIONS:		
Week	Practical Session	Hours
1	Identification of helminths - Trematoda	2
2	Identification of helminths - Trematoda	2
3	Identification of helminths - Cestoda	2
4	Identification of helminths - Cestoda	2
5	Identiication of helminthes - Nematoda (Instestinal)	2
6	Identiication of helminthes - Nematoda (Instestinal)	2
7	Identiication of helminthes - Nematoda (Tissue)	2
8	Identification of protozoa - Intestinal	2
9	Identification of protozoa - Intestinal	2
10	Identification of protozoa – Urogenital, Blood	2
11	Identification of protozoa - Blood	2

12	Identification of arthropods	2
13	Identification of arthropods	2
14	Identification of arthropods	2
15	Revision	2

F- ASSESSMENT TASKS:

#	Type of assessment task	Week	Total Grades
1	Assignment submission	Week 10	5%
2	Midterm examination (written)	Week 8	15%
3	Continuous assessment	Weeks 1-14	10%
4	Final practical exam	Week 16	30%
5	Final written examination	Week 17-18	40%

G- LEARNING RESOURCES:

1- Required textbook:

1. Strikcland GT. (2000) Hunter tropical medicine and emerging infectious diseases. 8th edition. WB Saaundders Company.
2. Burton J. Bogitsh, Clint E. Carter, Thomas N. Oeltmann (2013): Human Parasitology, Fourth Edition 4th Edition. Academic Press, USA
3. Eric S. Loker, Bruce Hofkin (2015): Parasitology: A Conceptual Approach. Taylor & Francis Inc, USA.

2- Essential references:

4. Cheesbrough M. (2006). District laboratory practical in tropical countries part 2. Cambridge. (we have 4 copies)
5. Adolph, K.W. (1995). Methods in Molecular Genetics: Microbial Gene Techniques. Academic Press Inc.
6. Elizabeth A. Zeibig (2013) Clinical Parasitology: 2ed Edition. A Practical Approach. Saunders, USA (615 KAT: we have 3 Copies).
7. Franklin A. Neva; Harold W. Brown (2012): Basic Clinical Parasitology. Appleton and Lange, USA(612.1 KAT: we have 8 Copies) .

Notes:

- Assignments topics and requirements shall be announced by the end of Week-1, the deadline for submission is 12pm Thursday of Week-10 (each semester).
- Assignments and written assessment tasks must be verified against plagiarism, the maximum acceptable percentage is determined by the department (according to each level).
- Continuous assessment methods may include quizzes, internet searches, home-works, exercises, class activity, scratch cards, presentations, group work, etc.
- Practical exams may contain hands-on experiments, laboratory work, simulations, or demonstrations.
- Written exams will include multiple-choice questions (MCQ), short essay questions, and long essay questions.