

**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Department of Medical Laboratory Sciences**  
**Second Semester 2007**

<b>Course Information</b>	
<b>Course Title</b>	<b>Medical Parasitology</b>
<b>Course Number</b>	<b>LM 361</b>
<b>Prerequisites</b>	<b>B 103, B107.</b>
<b>Course Website</b>	<b><a href="http://www.just.edu.jo">http://www.just.edu.jo</a></b>
<b>Instructor</b>	<b>Prof. Laila Nimri</b>
<b>Office Location</b>	<b>PH1L1</b>
<b>Office Phone</b>	<b>-----</b>
<b>Office Hours</b>	<b>Sunday: 10-11, Monday and Wednesday: 11-12,</b>
<b>E-mail</b>	<b>-----</b>
<b>Teaching Assistant</b>	<b>Esam Mayyas and Laila Al Omari</b>
<b>Course Description</b>	
<b>This is an introductory course to medical parasitology and the laboratory diagnostic methods.</b>	

<b>Text Book</b>	
<b>Title</b>	<b>Medical Parasitology (Markel and Voge's)</b>
<b>Author(s)</b>	<b>EK Markel, DT John and WA Krotoski.</b>
<b>Publisher</b>	<b>W.B. Saunders Company</b>
<b>Year</b>	<b>1999</b>
<b>Edition</b>	<b>8th</b>
<b>Book Website</b>	
<b>References</b>	<b>Medical Parasitology: Laboratory manual. Nimri L. 2005.</b>

<b>Assessment Policy</b>		
<b>Assessment Type</b>	<b>Expected Due Date</b>	<b>Weight</b>
<b>First Exam</b>	<b>Fifth week of the semester</b>	<b>30%</b>
<b>Second Exam</b>	<b>10<sup>th</sup> week of the semester</b>	<b>30%</b>
<b>Final Exam</b>	<b>The end of the semester</b>	<b>40%</b>
<b>Assignments</b>	<b>Posters for parasites life cycles, and diagnostic methods</b>	<b>5% bonus</b>

<b>Course Objectives</b>		<b>Weights</b>
1. Give basic information about the parasites of medical importance including animal parasites that are transmissible to man (zoonosis)		15%
2. Learn about the epidemiology and geographical distribution of each parasite.		15%
3. The life cycle, which includes the intermediate host and definitive host, the infective and diagnostic stages, mode of transmission.		20%
4. The pathogenesis: general idea about the signs and symptoms & the course of the disease caused by the parasite		15%
5. Diagnosis: methods of laboratory diagnosis		25%
6. Preventive and control measures.		10%

<b>Teaching &amp; Learning Methods</b>
<p>Lectures which include:  Discussions  Demonstrations  Audio-visual materials: data show and PowerPoint presentations  Laboratory applications  Reading assignments  Laboratory slide tests  Written tests</p>

<b>Learning Outcomes: Upon successful completion of this course, students will be able to</b>		
<b>Related Objective(s)</b>		<b>Reference(s)</b>
1-4	Process the different clinical specimens based on the knowledge acquired about the epidemiology and life cycle of each parasite.	Chapter 1-10 and Handouts
5	1. Select the best method for the diagnosis of different parasites and perform it. 2. Identify the pathogenic parasites and distinguish	Laboratory manual

	them from the non-pathogenic parasites.	
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Useful Resources
University library, Internet, CDC website: <a href="http://www.cdc.gov">www.cdc.gov</a>

Course Content		
Week	Topics	Chapter in Text (handouts)
1	Intestinal protozoa 1. Definition of terms, and the pathogenic amoeba: <i>Entamoeba histolytica</i>	2
2	1. The non pathogenic amoeba: i.e., <i>Entamoeba hartmanni</i> , <i>Entamoeba coli</i> . 3. The flagellates ( <i>Giardia lamblia</i> , <i>Chilomastix mesneli</i> , <i>Trichomonas hominis</i> , <i>T. vaginalis</i> ).	3
3	1. The ciliates ( <i>Balantidium coli</i> ) 2. The intestinal coccidia ( <i>Isospora</i> , <i>Cryptosporidium</i> )	3
4	1. The apicomplexa or sporozoa ( <i>Plasmodia</i> spp.).	4
5	B. The blood and tissue dwelling protozoa The hemoflagellates ( <i>Trypanosoma</i> & <i>Leishmania</i> spp.)	5
6	The coccidia ( <i>Toxoplasma gondii</i> & <i>Sarcocystis</i> )	5
7	The opportunistic amoeba ( <i>Naegleria</i> & <i>Acanthamoeba</i> )	3
8	III. Helminths A. The Trematodes: 1. Intestinal flukes a. <i>Fasciolopsis buski</i> b. <i>Echinostomes</i> c. <i>Heterophyid heterophid</i>	6
9	2. The liver flukes a. <i>Fasciola hepatica</i> b. <i>Clonorchis sinensis</i> c. <i>Opisthorchis</i> d. <i>Dicrocoelium dendriticum</i>	6
10	3. The blood flukes a. <i>Schistosoma</i> spp. 4. The lung flukes: <i>Paragonimus westermani</i>	6
11	B. The Cestodes: <i>Diphyllobothrium latum</i> , <i>Taenia</i> spp., <i>Multiceps</i> , <i>Echinococcus granulosus</i> , <i>Dipylidium caninum</i> and <i>Hymenolepis</i> spp.	7
12	C. The Nematodes	8

	<b>1. The intestinal nematodes: <i>Ascaris lumbricoides</i>, <i>Enterobius vermicularis</i>.</b>	
<b>13</b>	<b>Hookworms (<i>Ancylostoma</i> &amp; <i>Necator</i>), <i>Srongyloides</i>,</b>	<b>8</b>
<b>14</b>	<b><i>Trichuris trichura</i>, The blood and tissue nematodes: the filariae.</b>	<b>9</b>
<b>15</b>	<b>guinea worm, <i>Trichinella spiralis</i> .</b>	<b>9</b>
<b>16</b>	<b>Arthropodes and ectoparasites</b>	<b>10</b>

<b>Additional Notes</b>	
<b>Assignments and Projects</b>	<b>5%</b>
<b>Graded Exams</b>	<b>70%</b>
<b>Laboratory</b>	<b>30%</b>