Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED

SCIENCES

Faculty of Laboratory medicine..

Department of Parasitology

Course Specification of Diagnostic Parasitology
Course No. (03.02 .347)

FACULTY OF LABORATORY MEDICINE

Council for Accreditation & Quality Assurance

Course number:

Course name : -Diagnostic Parasitology

I. Course Identification and General Information:						
1	**Course Title:**	Diagnostic Parasitology				
2	**Course Code & Number:**	03.04.347				
3	**Credit Hours:**	**Theory Hours**				
		Lecture	**Exercise**	Practical	**Credit Hours**	
		2	0	2	3	
4	**Study Level/ Semester at which this Course is offered:**	4th Level / 1st Semester				
5	**Pre –Requisite (if any):**	Helminthes protozoa				
6	**Co –Requisite (if any):**	None				
7	**Program (s) in which the Course is Offered:**	Faculty of Laboratory medicine				
8	**Language of Teaching the Course:**	English				
9	**Study System:**	semester				
10	**Mode of Delivery:**	Presentations and exercises				
11	**Location of Teaching the Course:**	University Campus				
12	**Prepared by:**	Dr / Ali gamali AL-Hawri				
13	**Date of Approval:**	2022-2023				

A. II. Course Description:

This course offers types of parasites those infect humans, pathogenicity together with a brief clinical description and determining suitable clinical specimens for laboratory diagnosis using microscopy, immunoassays as well as molecular diagnosis.

III. Alignment Course Intended Learning Outcomes with program outcomes		
III. Course Intended Learning Outcomes (CILOs)		**Referenced PILOs**
A. Knowledge and Understanding: ***Upon successful completion of the course, students will be able to:***		
a1	**Describe** the laboratory tests/methods commonly used in diagnosis of different parasitic infections	**A1**
a2	**Define** the ways underlying infections with different parasites of medical importance to human in terms of classification, morphology, pathology and pathogenesis,	**A3**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	**Diagnosis** of different clinical specimen(s) and laboratory test(s) on the patients.	B2
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	**Perform** different parasitological laboratory tests in safe and effective way	**C3**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	Relate the morphological features of helminthes and protozoa.	D1

C. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :			
(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	**Describe** the laboratory tests/methods commonly used in diagnosis of different parasitic infections	Lectures:	Exam
a2	**Define** the ways underlying infections with different parasites of medical importance to human in terms of classification, morphology, pathology and pathogenesis,	Lectures	Exam
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	**Diagnosis** of different clinical specimen(s) and laboratory test(s) on the patients.	Lectures	Exam
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	**Perform** different parasitological laboratory tests in safe and effective way	Practical sessions	Practical exam
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	Relate the morphological features of helminthes and protozoa.	seminar	discussion

III. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes (CILOs)
1	Introduction to Diagnostic Parasitology	(Terms, parasite, hosts, zoonosis, pathology, pathogenesis	1	2	a1,a2,b1,d1
2	Trematodes: General Characteristics of flat worms:	Schistosomiasis	1	2	a1,a2,b1,d1
3	Trematodes	(liver and intestinal flukes)	1	2	a1,a2,b1,d1
4	Cestodes: General Characteristics:	Fish Tapeworm	1	2	a1,a2,b1,d1
5	Cestodes: General Characteristics:	Taeniasis and Cysticercosis	1	2	a1,a2,b1,d1
6	Cestodes:	Hydatid cyst and Hymenolepsiasis	1	2	a1,a2,b1,d1
7	Med term		1	1	
8	Nematodes: General Characters and classification	Ascaris Lumbricoides, Hookworm, whipworm and pinworm infections	2	4	a1,a2,b1,d1
9	Nematodes	Wuchereria bancrofti (lymphatic filariasis)	1	2	a1,a2,b1,d1
10	Protozoa	General Characters and classification: Ameobiasis and Giardiasis	1	2	a1,a2,b1,d1
11	Intestinal protozoa:	Coccidian parasites and Trichomoniasis	1	2	a1,a2,b1,d1
12	Extra-intestinal protozoa	Malaria	1	2	a1,a2,b1,d1

13	Extra-intestinal protozoa	Leishmania and toxoplasma	1	2	a1,a2,b1,d1
14	Final exam		1	2	
	Number of Weeks /and Units Per Semester		**14**	**29**	

B - Practical Aspect: (if any)

Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	Laboratory safety (clinical samples and sampling) and Microscopy (structure, uses and handling)	2	4	c1,d1
2	Stool concentration & permanent staining techniques + Demonstration slides (Schistosoma)	1	2	c1,d1
4	Demonstration slides (liver and intestinal flukes)	1	2	c1
5	Demonstration slides (Fish Tapeworm and Taeniasis)	1	2	c1,d1
6	Demonstration slides (Hydatid cyst and Hymenolepsiasis)	1	2	c1,d1
7	Demonstration slides (Ascaris Lumbricoides, Hookworm, whipworm and pinworm infections)	1	2	c1,d1
8	Demonstration slides (Wuchereria bancrofti)	1	2	c1,d1
9	Demonstration slides (Ameobiasis and Giardiasis)	1	2	c1
10	Demonstration slides (Coccidian parasites and Trichomoniasis)	1	2	c1
11	Demonstration slides (Malaria)	2	4	c1
12	Demonstration slides (Leishmania and toxoplasma)	1	2	c1,d1
13	**Final practical exam**	1	2	c1,d1
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:	
1-	Lectures
2-	Practical session

VI. Assessment Methods of the Course:

No	Assignment
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Midterm Exam**	8	20	20%	a1,a2,b1,c1
2	**Practical exam**	14	30	30%	a1,a2,b1,c1,d1
3	**Final Exam**	16	50	50%	a1,a2,b1,c1
	Total	100		100%	

IX. Learning Resources:	
1- Required Textbook(s).	
1-	Medical parasitology,11th Edition by peter j. Hotez, Wiliam C
2-	A Laboratory Manual ,2nd Edition byDennis D.Juranek and James W.Warren
2- Essential References.	
1-	Warren Levinson, Peter Chin-Honh, Elizabeth A. Joyce, Jesse Nussbaum and Brian Schwartz, Review of Medical Microbiology and Immunology, 2018, 15th edition, McGraw-Hill, ISBN: 978-1-259- 64449-8
2-	Bailey & Scott's Diagnostic Microbiology 15th Edition Patricia M. Tille- February 4, 2021
3- Electronic Materials and Web Sites *etc*.	
1-	Centers for Disease Control and Prevention (CDC)
2-	World Health Organization (WHO)
3-	American Society of Tropical Medicine and Hygiene (ASTMH)
4-	American Society of Parasitologist

XI. *Course Policies:*	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** -If the student dose not attend for more than 6 times, the student will be obligated to withdrew from the course
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration