



## Course Syllabus of Field Training in Parasitology

Faculty: Medicine and Health Science

Department: Health sciences

Program: Bachelor in Medical Laboratories

I. General information about the course instructor :							
Name	Dr. Rashad Abdul-Ghani	Office Hours(2 Hours Weekly )					
Location & phone number	737259467	Sat	Sun	Mon	Tue	Wed	Thu
Email	r.abdulghani@ust.edu			2			

II. General information about the course:						
1.	Course Title :	Field Training in Parasitology				
2.	Course Code and Number :	BML482				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
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4.	Study Level and Semester:	4 <sup>th</sup> year/ 2 <sup>nd</sup> semester				
5.	Pre-requisites:	None				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Medical Laboratories				
8.	Teaching Language:	English				
9.	Instruction location:	University of Science and Technology, Sana'a ,Yemen				



عميد الكلية:  
د. عبد الله المخلافي

رئيس القسم:  
د. عبد الحبيب ريدمان

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المراجع:  
د. محمد مهدي  
د. مجاهد نصار

الموصف:  
د. رشاد عبد الغني

### III. Course Description

This course provides undergraduate medical laboratory students with the field training required for the performance of different diagnostic procedures of parasitic infections for clinical and epidemiological purposes. It equips the students with the essential knowledge and practical skills required for the proper collection, preservation, examination and reporting of different clinical specimens for parasites. It provides the students with the essential knowledge and practice of quality control within the context of total patient care and quality assurance in medical laboratory technology. It is delivered by supervised visiting to hospitals, laboratories and community.

### IV. Course Aims: This course aimed to:

1. Provide the students with the essential knowledge about the proper collection, preservation, processing and examination of clinical specimens for parasites within the context of quality assurance in the medical laboratory.
2. Enable the students to critically analyze and propose solutions that ensure the quality in diagnostic parasitology in the appraisal of health problems and to choose cost-effective diagnostic approaches.
3. Equip the students with the practical skills to implement various diagnostic procedures within the context of quality assurance and to identify and report parasites in different clinical specimens.
4. Enable the students to effectively manage time, be involved in collaborative teamwork and use internet resources for continuing self-learning.

### V. Course Intended Learning Outcomes (CILOs) :

- After completing this course, students will be able to:
  1. Recognize the ethics required when dealing with patients in real situations.
  2. Describe the best approaches for the collection, preservation and transport of clinical specimens for parasites.
  3. List the different types, advantages and disadvantages of techniques used for parasite concentration, staining and examination in the laboratory and the field.
  4. Recognize the different types and uses of special diagnostic techniques in parasitology for clinical and epidemiological purposes.
  5. Critically analyze and propose solutions for emerging problems in the laboratory and under field conditions.
  6. Decide on choosing the best cost-effective diagnostic approaches for the diagnosis of parasitic infections among a variety of alternatives.
  7. Apply safety precautions, quality control and quality assurance in diagnostic parasitology laboratory and during field surveys.
  8. Efficiently perform different procedures in diagnostic parasitology from specimen collection under field conditions to laboratory examination and reporting of the result.
  9. Perform special diagnostic techniques in parasitology for clinical and epidemiological purposes.
  10. Manage time and communicate well with colleagues and staff and follow the code of conduct adopted by the institution.



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المراجع :  
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د. مجاهد نصار

الموصف :  
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VI. Course Contents				
Training Aspect:				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to ethics in field research and studies	<ul style="list-style-type: none"> <li>Ethics in data collection during field studies</li> <li>Dealing with patients</li> <li>Guide to field training in parasitology</li> </ul>	1 <sup>st</sup>	4
2	Quality assurance in parasitology field studies	<ul style="list-style-type: none"> <li>Training on the concepts of quality control (pre-analysis; analysis; post-analysis).</li> <li>Writing and following SOPs of different parasitological procedures</li> <li>Proper waste management</li> </ul>	2 <sup>nd</sup>	4
3	Data collection in the field of parasitology	<ul style="list-style-type: none"> <li>Data collection tools/ instruments</li> <li>Types of data collected</li> <li>Filling forms with patient's data</li> </ul>	3 <sup>rd</sup>	4
4	Collection, preservation and examination of stool samples in the field	<ul style="list-style-type: none"> <li>Collection and labeling of stool specimens</li> <li>Preservation of stool specimens and the types of stool preservatives</li> <li>Routine O&amp;P examination of stool</li> </ul>	4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup>	12
5	Collection and processing of diarrheic specimens for special permanent staining procedures	<ul style="list-style-type: none"> <li>Collection, preservation and processing of watery specimens from targeted population groups</li> <li>Staining with modified Ziehl-Neelsen stain and other permanent stains for intestinal coccidia and microsporidia.</li> <li>Reporting results for intestinal coccidia and microsporidia</li> </ul>	7 <sup>th</sup> ,8 <sup>th</sup>	8
6	Field application of Kato-Katz technique for schistosomiasis and soil-transmitted helminths	<ul style="list-style-type: none"> <li>Collection and processing of stool samples for the Kato-Katz technique.</li> <li>Examination of Kato-Katz smears</li> <li>Reporting parasite count in eggs per gram</li> </ul>	9 <sup>th</sup> ,10 <sup>th</sup>	8
7	Collection and examination of urine for <i>Schistosoma haematobium</i>	<ul style="list-style-type: none"> <li>Collection of urine</li> <li>Macroscopic examination of urine</li> <li>Examination of urine using centrifugation and filtration techniques</li> <li>Reporting of urine parasites</li> </ul>	11 <sup>th</sup>	4
8	Collection, preparation, staining and examination of blood films for malaria and other blood parasites	<ul style="list-style-type: none"> <li>Thick and thin blood smears for the detection of malaria parasites</li> <li>Staining techniques for malaria and other blood parasites</li> </ul>	12 <sup>th</sup> ,13 <sup>th</sup>	8
9	Collection and examination of skin specimens for parasites	<ul style="list-style-type: none"> <li>Collection, preparation, staining and examination of skin specimens skin scrapings for <i>Leishmania</i> species.</li> <li>Collection and examination of skin snips for <i>O. volvulus</i></li> <li>Reporting of skin parasites</li> </ul>	14 <sup>th</sup> ,15 <sup>th</sup>	8
10	Final exam		16 <sup>th</sup>	4
Total number of weeks and hours				64

جامعة العلوم والتكنولوجيا  
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 معتمد  
 APPROVED  
 المراجع

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د. محمد مهدي  
 د. مجاهد نصار

الموصف :  
 د. رشاد عبد الغني