



كلية الطب  
جامعة اسوان



Faculty of Medicine  
Quality Assurance Unit

***Medical Doctorate (MD) Degree Program  
and Courses Specifications for **Medical  
Parasitology*****

(According to currently applied **bylaws**)

***Medical Parasitology***  
***Faculty of medicine***  
***Aswan University***  
***2021-2022***

<i>Contents</i>	
<i>Item</i>	<i>Page</i>
<b>Program Specification For Medical Parasitology,2021-2022</b>	
<b><u>A. Basic Information</u></b>	<b>2</b>
<b><u>B. Professional Information</u></b>	
<b>1. Program aims</b> <b>2. Intended learning outcomes (ILOs) for the whole program</b> <b>3. Program academic standards</b> <b>4. Program external references</b> <b>5. Program structure and contents</b> <b>6. Courses contents and Matrixes (Annex 1)</b> <b>7. Admission requirements</b> <b>8. Progression and completion requirements</b> <b>9. Assessment methods and rules</b> <b>10. Program evaluation</b> <b>11. Declaration</b>	<b>3</b>
<b>- Annex 1, Courses Specifications and Matrixes</b>	<b>18</b>
<b>1- Course 1: Medical statistics.</b>	<b>19</b>
<b>2- Course 2 Research methodology</b>	<b>25</b>
<b>3- Course 3: Medicolegal Ethics in Medical Practice and Scientific Research</b>	<b>31</b>
<b>4- Course 4: Diagnostic parasitology</b>	<b>36</b>
<b>5- Course 5: Speciality: Parasitology</b> <b>Unit 1: Medical Parasitic Helminthology</b> <b>Unit 2 : Medical Parasitic Protozoology</b> <b>Unit 3 : Medical Entomology</b> <b>Unit 4: Immunoparasitology</b> <b>Unit 5 : Clinical Parasitology</b>	<b>41</b>
<b>- Annex 2, Program Academic Reference Standards (ARS)</b>	<b>84</b>
<b>- Annex 3, Teaching methods</b>	<b>90</b>
<b>- Annex 4, Assessment methods</b>	<b>93</b>
<b>- Annex 5, Program evaluation tools</b>	<b>97</b>
<b>- Annex 6 Matrixes:</b> <b>I-National Academic reference standards(NARS) for postgraduates versus Program ARS</b> <b>II-Program ARS versus Program ILOs</b> <b>III- Program Matrix</b>	<b>99</b>
<b>- Annex 7, Additional information.</b>	<b>120</b>



Aswan University  
Faculty of Medicine  
Quality Assurance Unit (QAU)



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## M. D. degree of Medical Parasitology

### A. Basic Information

- + Program Title: Medical Doctorate (M.D.) in Medical Parasitology
  - + Nature of the program: Single.
  - + Responsible Department: Medical Parasitology
  - + Program Academic Director (Head of the Department):  
Prof Dr / Ahmed Kamal Dyab
  - + Coordinator (s):
    - Principle coordinator :
    - Assistant coordinator (s)
  - + Internal evaluators: Prof.Dr.Abdulla abdelsameah hasan
  - + External evaluator: Prof Dr / Nabil Shokrany
- Faculty of Medicine, Menia University, Medical Parasitology Department
- + Date of Approval by the Faculty of Medicine Council of Aswan University:
  - + Date of most recent approval of program specification by the Faculty of Medicine Council of Aswan University: ----
  - + Total number of courses: 5 courses+ 2 Elective courses

## **B. Professional Information**

### **1- Program aims**

- 1 -Develop a systematic understanding and critical awareness of medical parasitology, and skills in diagnosis of parasitic diseases.
- 2- Develop a critical evaluation of techniques used in parasites detection and diagnosis in any sample, and the acquisition of the ability to provide specialist opinion in parasitology.
- 3- Develop within the context of Biomedical Sciences, a comprehensive understanding of communication, research and scientific methods
- 4- Experience of the diagnostic techniques required to become technically competent in practical parasitology work, and to master the underlying analytical and clinical principles.
- 5- Training in the communication and teaching skills necessary for effective practice
- 6- The acquisition of life-long habits of reading, literature searches, consultation with colleagues, attendance at scientific meetings, and the presentation of scientific work those are essential for continuing professional development (CPD)
- 7- Enable to work effectively, in partnership with other health professionals, support staff, patients and service users
- 8- To provide the candidates with Medical Doctorate (M.D.) master:
  - Enabling them to start professional careers as specialists of parasitology in Egypt.
  - Making them recognized as parasitologists abroad.
  - Enabling them to pursue higher studies and subspecialties.
  - Enabling them to understand and get the best of published scientific research and do their own.

## **2-Intended learning outcomes (ILOs)** ***for the whole program:***

### **2/1 Knowledge and understanding:**

- A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical clinical epidemiological and socio behavioral science relevant to medical parasitology as well as the evidence –based application of this knowledge to practice including patient care.
- B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
- C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of medical parasitology .
- D. Mention principles and measurements of quality assurance and quality improvement in medical education and in practice of medical parasitology.
- E. Mention public health and health policy issues relevant to medical parasitology and principles and methods of system –based improvement of medical parasitology.

### **2/2 Intellectual outcomes**

- A. Apply the basic and clinically supportive sciences which are appropriate to medical parasitology related conditions / problem / topics.
- B. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to relevant situations related to medical parasitology.
- C. Plain research projects.
- D. Write scientific paper.
- E. Participate in clinical or laboratory risk management activities as a part of clinical governance.

- F. Plan for quality improvement in the field of medical education and practice in medical parasitology.
- G. Create / innovate plans, systems, and other issues for improvement of performance in medical parasitology.
- H. Present and defend his / her data in front of a panel of experts.
- I. Formulate management plans and alternative decisions in different situations in the field of medical parasitology.

## **2/3 Skills**

### **2/3/1 Practical skills (Patient Care)**

- A. Master practical skills relevant to medical parasitology for all common techniques and /or experiments including:
  - Collection, preparation and examination of any sample for detection of any parasites in it.
  - Identification of parasites.
  - Fixation of different parasitic materials.
  - Care of the microscope and calibrating it for measurement.
  - Concentration techniques.
  - Permanent staining techniques.
  - Special techniques for different parasites.
  - Immunoparasitological techniques.
- B. Master practical skills with non-routine, laboratory skills and techniques and under increasingly difficult circumstances, while demonstrating, appropriate and effective competency including:
  - immunoparasitological techniques.
  - using of electron microscope.
  - Special techniques for different parasites.
  - Application of biostatistics in research field.
  - Training with computer use on different methods of data entry and analysis.
- C. Master proficiency in performing available complex laboratory techniques and handling unexpected complications including:
  - Create and sustain a effective and ethically sound relationship with different staff.
  - How to communicate with other members of the parasitology department, other departments and other members of the multidisciplinary team.

Be able to communicate effectively, seek advice if unsure and Recognize own limitations.

Demonstrate sensitivity and responsiveness to others' culture, age, gender, and disabilities.

Work effectively with others as a member or leader of a team or other professional group.

D. Gather essential and accurate information about practical/laboratory skills of medical parasitology related conditions including:

Correlate the clinical data of the patient with provisional diagnosis

Determine the appropriate differential diagnosis for the case.

Know when to resort to special techniques.

Write a final gross and microscopic report with suitable summaries

Interpretation of parasitological cases to reach a final diagnosis.

D. Make informed decisions about diagnostic laboratory tests for medical parasitology related conditions including:

Best choice of the proper diagnostic laboratory tests for different samples .

Using different stains and techniques for blood examination

Identify the different tissues and organs by light and electron microscope for detection of parasites in it.

E. Develop and carry out diagnostic and teaching plans for all medical parasitology related conditions / skills including:

Preparation for teaching using power point presentation.

Experimental infection in lab animals to reach proper diagnosis.

Attendance of lab lectures.

Share in scientific meetings (seminars).

F. Use information technology to support practical decisions and students education in all medical parasitology related practical situations including:

Searching through the internet about what is new in parasitology.

The use of digital camera for light microscope description.

The wide use of computers for preparation of the lectures by power point program or making the statistics for the research purpose.

Electron microscopic studies (TEM &SEM) on different parasites.  
Demonstrate competent use of database, word processing and statistics programme.

G. Provide health care or any relevant services aimed at preventing the medical parasitology related health problems (if applied) including:

Prevention and control of schistosomiasis.

Prevention and control of entrobiasis

Prevention and control of capillariasis .

Prevention and control of ascariasis.

H. Lead other professionals, including those from other disciplines, to provide practical/laboratory-focused care in medical parasitology related conditions including: Work effectively with others as a member or leader of a team or other professional group. Be able to communicate effectively and seek advice.

I. Write competently all forms of professional reports related to medical parasitology (lab reports, experiments reports,) including reports evaluating these charts and sheets.

## **2/3/2 General skills**

### **Including:**

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

### **Practice-Based Learning and Improvement**

A. Demonstrate the competency of continuous evaluation of different types of practice including service provision to patients in the different areas of medical parasitology .

B. Appraise scientific evidence.

C. Continuously improve his practice including service provision to patients based on constant self-evaluation and life-long learning.

D. Participate in medical audits and research projects.



- E. Practice skills of evidence-based Medicine (EBM).
- F. Educate and evaluate students, mentors and other health professionals.
- G. Design logbooks.
- H. Design guidelines and standard protocols for different techniques and procedures.
- J. Apply knowledge of study designs and statistical methods to the appraisal of medical parasitology related studies
- K. Use information technology to manage information, access on- line medical information; for the important topics.

### **Interpersonal and Communication Skills**

- N- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-  
 Present a case. Write a consultation note. Inform patients of a diagnosis and therapeutic plan, Completing and maintaining comprehensive timely and legible medical records. Teamwork skills.
- O. Create and sustain a therapeutic and ethically sound relationship with patients.
- P. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Q. Work effectively with others as a member or leader of a health care team or other professional group.

## **Professionalism**

- R. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.
- S. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- T. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

## **Systems-Based Practice**

- U. Work effectively in academic and health care delivery settings and systems related to medical parasitology including good administrative and time management.
- V. Practice cost-effective services provision and resource allocation that does not compromise quality.
- W. Advocate for quality patient care and assist patients in dealing with system complexities.
- X. Design, monitor and evaluate specification of under and post graduate courses and programs.
- Y. Act as a chair man for scientific meetings including time management

### **3- Program Academic Reference Standards (ARS) (Annex 2)**

#### **Academic standards for Medical Doctorate (MD) degree in Medical Parasitology**

Aswan Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the National Academic Reference Standards for post graduate programs (NARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the faculty council on -----

### **4- Program External References**

- 1. ACGME (Accreditation Council for Graduate Medical Education).**
- 2. AAMC Policy Guidance on Graduate Medical Education, Assuring Quality Patient Care and Quality Education.**
- 3. NAQAA**
- 4. Student Handbook (for Course approved by Senate of Imperial College), London: University of London, Imperial College...( MSc in Hygiene & Tropical Medicine)**
  - **Comparison of provision to selected external references.**
    - Matching goals, duration and ILOs
    - Different program structure time table
    - The system abroad provides extensive training and skills for a career in human genetics thus facilitate the conversion of graduates from other relevant disciplines to human molecular genetics which is now considered one of the modern medicine because this science may shed light on the underlying molecular pathology of many diseases that are poorly understood at present,.
    - Absence of subspeciality programmes.

### **5- Program Structure**

**A. Duration of program: 4-6 years**

**B. Structure of the program:**

**Total number of credit points: = 420 CP**

**Master degree: 180 credit point**

**Didactic #: 37 (30.8%), practical 83 (69.2%), total 120 CP**  
**Thesis (80) and researches (40): 120 CP (50%)**

**First part**

**Didactic 10 (100%), practical 0 (0 %), total 10 CP**

**Second part**

**Didactic 24, (22.4 %), practical 83 (77.6 %), total 107 CP**

**Elective courses: 3 credit points**

**#Didactic (lectures, seminars, tutorial)**

According the currently applied bylaws:

**According the currently applied bylaws:**

Total courses: 120 credit point

Compulsory courses: 117 credit point (97.5%)

Elective courses: 3 credit point (2.5%)

	Credit points	% from total
▪ Basic science courses	10	4.1%
▪ Humanity and social courses	3	1.2%
▪ Speciality courses	107	44.6%
▪ Others ( Computer, ...)		
▪ Field training	83	34.8%
Thesis	80	33.4%
2 published researches	40	16.7%
Master degree	180	

**C-Program Time Table**

**A- Duration of program 4 years divided into**

○ Part 1

Program-related essential courses

Program-related basic science courses

- Medical statistic
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

○ Part 2

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree

Two elective courses can be set during either the 1<sup>st</sup> or 2<sup>nd</sup> parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course

Total degrees 1700 marks.

500 marks for first part

1200 for second part

Written exam 50%.

Practical and oral exams 50%.

### **D-Curriculum Structure: (Courses):**

 **Levels and courses of the program:**

Courses and student work load list	Course Code	Core Credit points		
		didactic #	training	total
<b>First Part</b>				
Basic science courses (10 CP) Course 1: Medical Statistics Course 2: Research Methodology Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research  Course 4 Diagnostic Parasitology	FAC309A FAC309B FAC310C  PAR308A	1 1 1  7		1 1 1  7
<b>Elective courses*</b>	3 CP			
- Elective course 1 - Elective course 2				
Thesis	80CP			
<b>Published researches**</b>	40 CP			
Second Part	Speciality courses 24 CP Speciality Practical Work (log Book) 123 CP			
Speciality Courses Course 5 parasitology	PAR308A	24		24
<b>Speciality Practical Work (123 CP)</b> parasitology 2	PAR308B		83	83
<b>Total of second part</b>		24	83	107

## 6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module  
Annex 6 II: Program Matrix

## 7-Admission requirements

✚ Admission Requirements (prerequisites) if any:

**I. General Requirements:**

- Master degree in the speciality.

**II. Specific Requirements:**

- Fluent in English (study language)

### VACATIONS AND STUDY LEAVE

The current departmental policy is The current departmental policy is to release assistant lecturer from their duties for 15 -30 days prior to the scheduled date for the first and final certifying M.D. degree examination

### FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

## 8-Progression and completion requirements

- ✚ Examinations of the first part could be set at 6 months from registering to the MD degree.
- ✚ Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, after setting the second part exams.
- ✚ The maximum duration of the program is 4 years could be extended to 5 in certain conditions.

**The students are offered the degree when:**

1. Passing the exams of all basic science , elective and sspeciality courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Discussion and acceptance of the MD thesis and publication of at least one scientific paper from the thesis in preferably specialized medical journals.

**9-Program assessment methods and rules (Annex IV)**

Method	ILOs measured
Written examinations: Structured essay questions Objective questions MCQ Problem solving	K & I
Clinical: Long/short cases OSCE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills



### Weighting of assessments:

Courses		Degrees			
First Part	Course Code	Written Exam	Oral and/or Practical I Exam		Total
Basic science courses:					
Medical Statistics & Research Methodology	FAC309A FAC309B	70 (35+35)	30 (15+15)		100
Medicolegal ethics in medical practice and scientific research	FAC310C	35	15		50
Diagnostic Parasitology	PAR308A	175	80	95	350
Second Part					
	Course code	written	Oral	clinical	Total
Speciality Courses					
1- Helminthology	<b>PAR308B</b>	125	75	50	250
2- Protozoology		125	75	50	250
3- medical Entomology		125	75	50	250
4- clinical parasitology		125	75	50	250
5- immuno-parasitology		100	100		200
Total		600	400	200	1200

\* 25% of the oral exam for assessment of logbook

500 marks for first part

1200 for second part

Written exam 50% (600 marks)

Clinical /practical and oral exams 50% (600 marks)

Elective courses 200

### ✚ Examination system:

#### ➤ First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam one paper 3 hours for each in Diagnostic parasitology + oral exam + Practical exam

#### ➤ Second part:

- Written exam five papers)3 hours for each in Medical Parasitology (Helminthes , Protozoology, Medical Enematology, Clinical parasitology, Immunoparasitology ) + Oral exam+ Practical exam

➤ **Elective courses**

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

### 10-Program evaluation

By whom	method	Sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s): According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

**#Annex 5 contains evaluation templates and reports.**

### 11-Declaration

**We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.**

**All course specifications for this program are in place.**

Contributor	Name	Signature	Date
<b>Program Principle Coordinator:</b>	<b>Prof Dr / Ahmed Kamal Dyab</b>		<b>7/2022</b>
<b>Head of the Responsible Department (Program Academic Director):</b>	<b>Prof Dr / Ahmed Kamal Dyab</b>		<b>7/2022</b>

