



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

**Department of Medical Parasitology
Course specifications**

**Medical Parasitology Doctorate
degree**

2016-2017 (PARA 9002)

Medical Parasitology Master Degree Course specifications

University: Tanta **Faculty:** Medicine **Department:** Medical Parasitology

A- administrative Information

1- Course title: Doctorate degree of medical Parasitology

2- Department offering the program: medical Parasitology Department

3- Department responsible for the course: medical Parasitology Department

4- Course code: PARA 9002

5- Level: Doctoratedegree of Medical Parasitology

6- No. of Credit / Taught hours:

Lectures: (4 credit hrs./60 taught hrs.) Practical: (3 credit hrs./90 taught hrs.)

7-Authorization date of course specification: 1/11/2016

B- Professional Information

1 – Overall Course aims:

The course aims to prepare a graduate to be able to perform and perfect the bases and methods of medical research in the field of medical Parasitology, and to have a broad information about the theoretical and practical aspects of general immunology, cell biology and molecular biology in its different topics; including:

- 1) Outline the basis of development of the immune system, immunodeficiency, and immunomodulation
- 2) Orientation about the role of immune therapy
- 3) Perfect professional skills, and use of recent molecular diagnostic techniques needed in practices of Medical Parasitology at a higher level.
- 4) Realize the importance of self development and continuous Medical education.

2 – Intended learning outcomes (ILOs):

A- knowledge and understanding:

By the end of the course, students should be able to:

- a.1- Identify the basis of development of the immune system, immunodeficiency, and immunomodulation.
- a.2- Identify the population genetic and genetic diversity of the parasites and epigenetic

- a.3- Mention the principles of different immunodiagnostic techniques including antigen antibody reaction.
- a.4- Discuss the different bio-molecular techniques including DNA probes, Blotting techniques and different techniques of PCR.

b. Intellectual skills:

By the end of the course the candidate will be able to:

- b.1-Analyze clinical problems related to medical parasitology and correlate clinical manifestations with the causative parasite and their pathogenesis.
- b.2-Analyze critically published papers in various areas of Immunology.
- b.3- Identify important unanswered questions in relevant researches and suggest ways of answering them.

c. Professional and practical skills :

By the end of the course the candidate will be able to:

- c.1 Perform different immunodiagnostic techniques.
- c.2- Practice laboratory tests dealing with molecular biology and nucleic acid amplification techniques including DNA probes, Blotting techniques and different techniques of PCR.
- c.3- Evaluate the advanced diagnostic techniques.
- c.4-Write and evaluate a professional medical report for practical Parasitology.

d. General and transferable skills (attitude & communication skill):

By the end of the course the candidate will be able to:

- d.1-Direct or share in a teamwork aiming at solving an environmental problem
- d.2- Use the update methods and technology for obtaining and transferring scientific data
- d.3- Arrange with community units for planning and achieving a field plan to combat an environmental health problem
- d.4-Perform continuous medical education.
- d.-5 Manage time perfectly.

3-Course contents

Total 7 credit hours Lectures: (4 credit hrs./60 taught hrs.)

Practical: (3 credit hrs./90 taught hrs.)

| Topics | No. of hours | | | |
|--|--------------|----------|------------------|------------------------------|
| | Lecture | Tutorial | Clinical/ lab | Self directed learning |
| I- General immunology | 13 | | | |
| 1. Development of the immune system | | | | |
| 2. Assessment of immune competence | 5 | | | |
| 3. Immunodeficiency | 5 | | | |
| 4. Immunomodulation | 3 | 2 | | |
| 5. Immunotherapy | 3 | 2 | | |
| 6. Population genetic and genetic diversity of the parasites | 2 | | | 3 |
| II-Molecular biology | | | | |
| - DNA probes and Blotting techniques | 3 | | | |
| - Epigenetic | 2 | | | 2 |
| - Different techniques of PCR | 3 | | | |
| III-Immunodiagnostic techniques | 5 | | | |
| -Antigen antibody reaction | 5 | | | |
| Practical courses | | | | |
| 1. Serological and immunological techniques (ELIZA, western blotting, fluorescent antibody technique, PCR and gel electrophoresis. | | | 40 | |
| 2. Different methods of blood examination. | | | 30 | |
| 3. Different methods of urine and stool examinations. | | | 20 | |
| Total | 51 | 4 | 90 | 5 |

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4-Teaching and learning methods

Throughout the course the candidate achieves these objectives by the following activities.

A- Attending Lectures.

B- Attending Seminars:

The candidate is expected to attend and participate in meetings that update relevant recent topics in molecular biology, relevant biochemical and genotyping of parasites, emerging parasitic problems, advances in parasite vaccinations, and advances in parasitic diagnosis and treatment.

C- Attending a Practical Course

5-Student Assessment

*-Log book: For follow up practical activities, effective discussion in lectures and attendance (Minimum acceptance attendance in each teaching course is 75%)

- To be eligible to enter the exam, log book should be fulfilled and signed by Head of the department

*-End of semester exam. : - MCQ examination will be during the 15th weeks

-Written, oral and practical examination will be a part of the final examination of the first part.

5.1 Written examination: to assess a.1/a.2./a.3./a.4./b.1/b.2/b.3

5.2 Practical :to assess a.1 /c.2/c.3/ c.4/d.3.

5.3 Oral : to assess b.1/b.2/b.3/c.1

5.4 logbook to assess b.3/d.1/d.2/d.3/d.4/d.5.

- Assessment schedule

Formative assessment each month through log book.After completing the 2 semesters of the first part, candidate will be eligible to enter written , oral, and practical exams exam hold twice / year at April and October according to post graduate bylaws.

6- Weighing of assessments

This semester will be a part of the final exams. of the first part

| | |
|---|----------|
| Written examination | 90 (60%) |
| Oral examination | 30 (20) |
| Practical/laboratory work | 30 (20) |
| Other types of assessment (formative only) | Log book |
| Total | 150 |

7- List of references

7.1 Course notes: the staff lectures, Book edited by staff members of the Parasitology department

7.2 Text book; Human parasitology

By Burton Jerome Bogitsh, Clint Earl Carter, Thomas N. Oeltmann 2005.

7.3 Recommended books

An introduction to Parasitology.

By Bernard E Matthews. Copyright. Cambridge University Press. 1998

Modern Parasitology.

Textbook of Parasitology. By Francis E and G Cox. Wiley Blackwell, Copyright. 1993

Principles and Practice of Clinical Parasitology.

Edited by S. Gillespie & Richard D. Pearson. Copyright © 2001 by John Wiley & Sons Ltd, Baffins Lane, Chichester, West Sussex PO19 1UD, England.

Human parasitology

By Burton Jerome Bogitsh, Clint Earl Carter, Thomas N. Oeltmann 2005.

Topley & Wilson's microbiology & microbiological infections By F.E.G. Cox, Derek Wakelin, Stephen H. Gillespie and Dickson D. Despommier 2010

Manson's Tropical Diseases, 22th edition, in I. Gordon C. Cook and Alimuddin I. Zumla editors, Saunders London, 2009.

Foundation of Parasitology, 8th edition, Gerald D. Schmidt and Larry S. Roberts editors, McGraw-Hill companies New York, 2009.

7.4 Periodicals and web sites

International Web site :

http://en.wikipedia.org/wiki/List_of_human_parasitic_diseases

http://emedicine.medscape.com/infectious_diseases-PARASITIC_INFECTIONS

<http://www.cdfound.to.it/html/intpar1.htm>

<http://www.wormdigest.org/content/view/157/2/>

<http://www.parasitology.com/worms/index.html>

<http://www.cdfound.to.it/atlas.htm>

<http://www.soton.ac.uk/~ceb/EctoEndodirectory/medendolinks.htm>

<http://homepages.ed.ac.uk/cpb/websites.htm>

<http://4smart.net/dir/sites/368-83115/Molecular-and-Biochemical-Parasitology>

<http://www.parasitology.com/resources/index.html>

<http://www.stumbleupon.com/su/36JahK/instruction.cvhs.okstate.edu/JCFOX/HTDOCS/CLINPARA/Index.htm>

<http://www.slideworld.org/slidestag.aspx/Medical-Parasitology>

8-Other resources/ facilities required for teaching and learning to achieve the above ILOs

None

9-we certify that all of the information required to deliver this course is contained in the above specifications and will be implemented

We verify that the above course and the analysis of students and external evaluator opinions are accurate.

course coordinator and head of department

name.....signature.....Date.....

Head of quality assurance unit:

name.....signature.....Date.....

