COURSE SPECIFICATION

(Laboratory diagnostic techniques)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Master degree of Medical Parasitology **(PAR 508)**
(2) Department offering the programme:	Medical Parasitology Department
(3) Department responsible for teaching the course:	Medical Parasitology Department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	**9-5-2016**
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title:	Laboratory Diagnostic Techniques
(8) Course code:	**PAR 508 LAB**
(9) Total teaching hours:	**30 hours**
(10) Credit hours	**2 hours/week**

(B) Professional information

(1) Program Aims:

-This program is designed to provide candidates with information about all techniques aiming to diagnose or treat parasitic diseases.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding: candidate will be able to:

A1. Recognize principle, types and applications of ELISA.

A2. Identify monoclonal antibodies production, purification, diagnostic and therapeutic applications.

A3. Recognize protein electrophoresis principle, visualization and medical applications.

A4. Recognize flow cytometry data analysis, labels, measurable parameters and applications.

A5. Illustrate sample preparation, antigen-antibody interaction and diagnostic markers in immunohistochemistry.

A6. Define steps of gene cloning, uses and methods of gene sequencing.

A7. Recognize stem cells isolation, maintenance, potential uses in medicine.

B- Intellectual skills

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

B1. Choose the suitable diagnostic techniques concerning the parasitic problem.

B2. Interpret laboratory findings to reach the proper diagnosis.

(3) Curriculum structure and content:

*Elective course

Subjects	2 hours/week
1. Enzyme-linked immunosorbent assay (ELISA)	**4**
2. Gene cloning and sequencing	**3**
3. Development of monoclonal antibodies	**3**
4. Protein electrophoresis	**4**
5. Flow cytometry	**4**
6. Immunohistochemistry	**4**
7. Stem cells	**4**
8. Proteomic studies for potential novel vaccines and drug targets.	**4**
Total teaching hours	**30 hours**

(4) Teaching methods:

4.1: Lectures

4.2: Power point presentation

4.3: Essay discussion

(5) Assessment methods:

5.1. Written exam for assessment of knowledge and intellectual ILOS.

5.2. MCQ for assessment of knowledge and intellectual ILOS.

Percentage of each assessment to the total mark:

Tools	Marks	Percentage of the total mark
Continuous assessment (MCQ)	20	20
Written exam	80	80
Total	100	

Other assessment without marks: seminars as described above included in the log book.

(6) References of the course:

6.1: Scientific papers and review articles.

Useful link: PubMed: http://www.ncbi.nlm.nih.gov/pubmed/

6.2 Textbooks

Facilities and resources mandatory for course completion:

Lecture halls and data show.

Course coordinator: Dr. Manar Sobh Azab

Head of the department: Dr. **Hala Ahmed El Nahas**

Date:/6/2026