

## **Peer Revision**

<b>Reviewers</b>	<b>University</b>	<b>Date of Revision</b>
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

# Program Specifications of Master Degree of Medical Parasitology

Sohag University

Faculty of Medicine

## Program Specification

### A- Basic Information

1. Program title: MSc. Degree of Medical Parasitology
2. Program type: single
3. Faculty: Faculty of Medicine
4. Departments :Medical Parasitology
5. Coordinator: Dr. Hana El-Hadi.
6. Ass. Coordinator: Dr. Aml Mostafa.
7. External evaluator: Prof. Dr. Fatma Galal.
8. Last date of program specifications approval: Faculty council No. "317",  
decree No. "1533" dated 17/12/2018.

### B- Professional Information:

#### 1. Program aims:

Our aim is to graduate competent parasitologists mastering the professional scientific knowledge and skills essential for the practice and research work of medical parasitology, through providing:

1. Scientific knowledge of medical parasitology according to the national and international standards.
2. Skills necessary for applying the scientific analytic methods in medical parasitology.
3. Skills necessary for applying related scientific data in medical Parasitology for the purpose of solving community problems, using wisely available resources and saving the environment.
4. Active participation in community needs assessment and problem identification from the medical Parasitology view.
5. Skills of communication and team work, cooperating with colleagues and leading subordinates.
6. Self learning, modern technological aids and research abilities necessary for continuous professional development.
7. Having the ability to engage in further following researches and training in any branch of medical Parasitology.
8. Sound ethical and professional principles necessary for establishment of good communication with students and colleagues.
9. Sufficient training on leadership responsibilities.

## **2. Attributes of the postgraduate:**

1. Mastering the basics of scientific research methodologies.
2. The application of the analytical method and used in the field of Parasitology.
3. The application of specialized knowledge and integrate it with the relevant knowledge in practice.
4. Be aware of the problems and has modern visions in the field of Parasitology.
5. Identify problems in the field of Parasitology and find solutions to them.
6. Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.
7. Communicate effectively and the ability to lead work teams.
8. Decision-making in his professional contexts.
9. To employ and preserve the available resources to achieve the highest benefit.
10. Awareness of his role in the community development and preservation of the environment at the lights of both international and regional variables.
11. Reflects the commitment to act with integrity and credibility, responsibility and commitment to rules of the profession.
12. Academic and professional self development and be capable of continuous learning.

## **3. Intended learning outcomes (ILOs):**

### **a). Knowledge and Understanding:**

By the end of the program the graduate should be able to:

- a1. Mention the sufficient knowledge of the parasites affecting human beings all over the world and zoonoses with fundamentals of quality in the profession.
- a2. State the geographical distribution ( including recent changes and the environmental effects) and life cycle of each, inside and outside the body.
- a3. Describe the parasites on morphological bases.
- a4. List the pathology, clinical symptoms and complications of each parasite.
- a5. List the laboratory tests needed for diagnosis of each case and the latest developments in the field.
- a6. List drugs and instructions used for treating each case.
- a7. Describe control methods used against parasites and the effect on the environment.
- a8. Have a general idea on snails and their medical importance, especially of Egypt.
- a9. Recognize parasitic immunity bases.
- a10. Recognize the bases of molecular genetics.
- a11. Acquire sufficient knowledge about the environment.
- a12. Mention moral, ethical and legal aspects in the profession of medical parasitology.

### **b). Intellectual Skills:**

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

- b1. Differentiate between parasites affecting the same organ.
- b2. Differentiate between parasites present in the same sample.
- b3. Differentiate between parasites inhabiting the same geographical location.
- b4. Analyze given data and use it in problem solving.
- b5. Use self learning skills in solving problems.
- b6. Use analytical skills in anticipating risks.
- b7. Conduct a research study and perform paper writing and criticism on published papers.
- b8. Research on estimation of a parasitological community problem and planning for possible solutions.

b9. Select the diagnostic tools helpful for reaching the correct diagnosis.

**c). Professional and practical skills:**

By the end of this program the graduate should acquire the ability to:

- c1. Identify the infective and the diagnostic stages of the parasites
- c2. Identify some stages of the parasites.
- c3. Identify some of the medically important intermediate host especially those present in Egypt.
- c4. A box of at least 75 prepared slides of different entities is required.
- c5. Attending and participating in scientific conferences, meetings, workshops and thesis discussion that update relevant recent topics in molecular biology, relevant biochemical and geno-typing of parasites, and emerging parasitic problems
- c6. Perform one or more of the following skills:
- c7. Performing some laboratory tests available in the department lab.
- c8. Performing available immunological tests.
- c9. Dealing with lab animals: infecting, sacrifice, dissecting and examining.
- c10. Collecting and rearing of snails or medically important arthropods.

**d). General and Transferable Skills:**

By the end of the course the graduate should be able to:

- d1. Use the computer to enter parasitological web sites.
- d2. Collect scientific data from the computer.
- d3. Work in groups, as a leader or as a college.
- d4. Use clear parameters in assessment of others.
- d5. Collect data from medical centers and patients.
- d6. Skillfully practice communication skills .
- d7. Use the sources of biomedical information to remain current with advances in knowledge and practice (self learning).
- d8. Maintain a professional image in manner, dress, speech as well as the interpersonal relationships.
- d9. Work within limits of knowledge and experience.
- d10. Participate in the medical progress by having the basis of medical research studies.

**4. Academic Standards:**

Sohag faculty of medicine adopted The national academic reference standards (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for post graduate programs, as approved by the Faculty council decree no. 6854, in its session no. 177 dated 18/5/2009. ARS were approved by Faculty council decree no. 7528 in its session no.191, dated: 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its session No.60. Dated 26-12-2011

**5. Curriculum structure and contents:**

**5a- Program duration:** 6 semesters (3 years).

**5.b- Program structure:**

5. b. i- Number of hours per week:

Subject	Hours/week		
	Lectures	Practical	clinical
<b>First Part:</b>			
<ul style="list-style-type: none"> <li>• <u>Optional courses:</u> One of the following:</li> <li>• Microbiology and immunology</li> <li>• Biochemistry</li> <li>• Clinical Pathology</li> <li>• Public health &amp; Community Medicine</li> <li>• Tropical medicine</li> <li>• <u>Biostatistics and research methodology</u></li> </ul>	9	8	
	9	8	
	9	8	
	9	8	
	9	8	
	1	2	
<b>Second Part:</b>			
<ul style="list-style-type: none"> <li>• Medical parasitology</li> </ul>	4,5	6,5	

5.b.ii- No. of credit hours : 48

code	Item	No	%	
b.i	Total credit hours	Compulsory	37	74
		Elective	0	0
		Optional	13	26
b.iii	credit hours of basic sciences courses	13	26	
b.iv	credit hours of courses of social sciences and humanities	0	0	
b.v	credit hours of specialized courses:	24	48	
b.vi	credit hours of other course	2	4	
b.vii	Practical/Field Training	0	10	
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 <sup>st</sup> part	10	30	
	Level 2: 2 <sup>nd</sup> Part	24	48	
	Level 3: Thesis	6	12	

## 6. Program Courses

2 courses are compulsory courses.

- One out of four course is optional

### 6.1- Level /year of program.. .1st part ....semester...1

#### b.compulsory:

Course title	Total No. of Credit hours	lectures	Lab.	Program ILO
<u>Biostatistics and research methodology</u>	2	1	1	Covered

#### c.Optional:

Code No.	Course title	Total No. of Credit hours	lectures	Lab.	Program ILO
					Covered

	Medical Biochemistry	9	6	3	a5,a9,c4,c5,d2,d4,d6
	<b>Tropical Medicine &amp; Gastroenterology</b>	9	6	3	a4,a6,b1,d2,d4,d6,d8
	Medical Microbiology and Immunology	9	6	3	a5,a9,b1,b2,c1,c2, d2,d8
	Public health & community medicine	9	6	3	a1,a2, a7,a11, a12, b3,b4,b6, d2,d3, d4,d5, d6, d7,d8,d9
	Clinical and Chemical Pathology	9	6	3	a5,a9,b2,c4,c5,d4,d6,d8
	Medical biostatistics & research methodology	2	1	1	a8,b1,b4,b5,c1,c3,d1,d2 ,d3, d4,d6,d7,d8

### Second Part:

- Level /year of program.. .2nd part ....semester...2&3

Code No.	Course title	Total No. of Credit hours	No. of hours / week		Program ILO
			Lect.	Lab.	Covered
	Medical parasitology	24	4,5	6,5	a1,a2,a3,a4,a5,a6,a7,a8,a9, a10,a12, b1,b2,b3,b4,b6,b7,b8,c1, c2,c3,c4,c5,c6.,c7,c8,d1,d2, d3,d4,d5 ,d7,d8,d9,d10

## 7. Program Admission Requirements

### I- General Requirements.

- Candidate should have either:
  - MBBch degree from any Egyptian Faculty of Medicine or
  - Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
- Candidate should pass the house office training year.
- Those who are not university hospital residents should pass a training for at least 12 months in one of the known hospitals.
- Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

### II- Specific Requirements.

- Candidates graduated from Egyptian Universities should have at least "Good Rank" in their final year/ cumulative years examination, and grade "Good Rank" in Parasitology course too.
- Candidate should know how to speak & write English well
- Candidate should have computer skills

## 8. Regulations for Progression and Program Completion

Duration of program is 50 credit hours ( $\geq 4$  semesters  $\geq 3$  years), starting from registration till 2<sup>nd</sup> part exam; divided to:

**First Part: (15 Credit hours  $\geq 6$  months  $\geq 1$  semester):**

- Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1<sup>st</sup> part.
- Two sets of exams: 1st in October — 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only for the next time only, and if re-fail, should register for the course from the start.

**Thesis/Essay(6 Credit hours  $\geq 6$  months=1 semester):**

- Completion of the 1<sup>st</sup> part credit hours and passing the exams are pre requisites for documentation of the **Thesis/Essay** subject.
- Should be completed, defended and accepted after passing the 1<sup>st</sup> part examination, and at least one month before allowing to enter 2<sup>nd</sup> part final examination.
- Accepting the thesis is enough to pass this part.

**Second Part: (24 Credit hours  $\geq 18$  months= 3 semesters):**

- Program related specialized sciences of Parasitology courses.
- Completion of the 1<sup>st</sup> part credit hours and passing the exams are pre requisites for documentation of the 2<sup>nd</sup> part courses.
- Practical training:36 month training in the department of medical parasitology
- The students should pass the 1<sup>st</sup> part before asking for examination in the 2<sup>nd</sup> part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (5 Credit hours; with obtaining  $\geq 75\%$  of its mark ) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
  - Each Cr. Hr.= 60 working Hrs.
  - Logbook= 5 Cr. Hr. X 60 working Hrs = 300 Working Hrs.
  - Collection of working Hrs. is as following:

Activity		Hrs
Grand rounds	اجتماع علمى موسع	٦
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية داخلي خارجة	١٢/day 18/day
Thesis discussion	حضور مناقشات رسائل	٦
Workshops	حضور ورش عمل	١٢/day
Journal club	ندوة الدوريات الحديثة	٦
Seminars	لقاء علمى موسع	٦
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	٦

Self education program	برنامج التعليم الذاتي	٦
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- Two sets of exams: 1st in October - 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the 2<sup>nd</sup> part exam, a score of at least 60% (Level D) in each course is needed.

### 9. Methods of student assessments:

Method of assessment	weight	The assessed ILOs
1-Activities		- General transferable skills, intellectual skills
2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	50%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3-OSCE/ OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

### Assessment schedule:

#### Part I:

- Written Exam (3 hours): for one of the branches of specialization optional + Structured oral Exam + OSPE.
- Biostatistics & Computer and Research Methodology: Written Exam (2 hours) + Structured oral Exam+ OSPE

#### Part II:

- Parasitology: Written Exam (3hours) + Structured oral Exam+ OSPE

### 10. Evaluation of program:

Evaluator	Tool	Sample
1- Senior students	Questionnaire	2
2- Alumni	Questionnaire	10
3- Stakeholders (Employers)	Questionnaire	10
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other		



# Course Specifications of Medical Microbiology and Immunology for MSc. degree in Medical Parasitology

Sohag University

Faculty of Medicine

1. Program on which the course is given: MSc. Medical Parasitology.
2. Optional element of program
3. Department offering the program: Medical Parasitology.
4. Department offering the course: Medical Microbiology and Immunology.
5. Academic year / Level: Post graduates registered for MSc degree of Medical Parasitology.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Medical Microbiology & Immunology

**Code:** MIC0516-200

### Total hours

Lectures	Practical	Total hour	Credit hour
135	120	255	13

## B. Professional Information

### 1. Overall Aims of Course

By the end of the course the student should be efficiently able to:

Have the professional knowledge of the microorganisms affecting human beings all over the world and the relations between them and the parasites. The student also should recognize the pathology, clinical symptoms, complications and perform the laboratory tests needed for diagnosis of each diseases. And should also gain the professional knowledge about the structure and function of the immune system so as to perform immunological studies needed in his/her main specialty.

### 2. Intended Learning Outcomes of Course (ILOs):

#### a) Knowledge and Understanding:

By the end of the course the student is expected to:

- a1. List the microorganisms affecting human beings all over the world particularly those related to parasites.
- a2. Describe the metabolism and genetics of organisms.
- a3. Describe the pathology, clinical symptoms and complications of each disease.
- a4. Summarize the laboratory tests needed for diagnosis of each case.
- a5. Name some of the drugs and instructions used for treatment of each case.
- a6. Describe some infection control methods
- a7. Describe the structure and function of immune system

**b) Intellectual Skills:**

By the end of the course the student is expected to:

- b1. Differentiate between the different microorganisms (Bacteria, viruses and fungi)
- b2. Differentiate between the different types of bacteria on the bases of staining and culturing methods.
- b3. Differentiate between organisms affecting the same body parts

**c) Professional and Practical Skills:**

By the end of the course the student should have the ability to

- c1. Recognize micro-organisms on morphological bases.
- c2. Identify and perform the methods of staining, culturing and biochemical reactions
- c3. Recognize and perform some serological tests used in diagnosis.
- c4. Handle of samples.

**d) General and Transferable Skills:**

By the end of the course the student is expected to:

- d1. Use the computer and internet to gather scientific informations.
- d2. Practice group co-ordination.

**3. Contents**

Topic	Total no. of hours	Lecture	Tutorial/ Practical
General bacteriology	90	20	30
Systemic bacteriology	60	20	40
Mycology	30	20	10
Virology	25	20	5
Nosocomiology	20	15	5
Immunology	70	40	30
<b>Total</b>	<b>255</b>	<b>135</b>	<b>120</b>
<b>Credit</b>	<b>13</b>	<b>9</b>	<b>4</b>

**4. Teaching and Learning Methods**

- 4.1-lectures.
- 4.2-departement practical class and notes.
- 4.3-practical lessons.
- 4.4- Practical assignments and sample collection.

**5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSPE	-Practical skills, intellectual skills
5.5 assignment	-General transferable skills, intellectual skills

## Assessment Schedule

Assessment 1...Exam	Week:16
Assessment 2 ...Final exam...	Week:24
Assessment 3... Structured Oral Exam ....	Week:24
Assessment 4... OSPE....	Week:24

## Weighting of Assessments

Periodic Examination	15%
Final-term Examination	50%
Structured Oral Exam	15%
OSPE	20%

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Total	100	%
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## 6. List of References

### 6.1- Course Notes

Notes of the department and practical notebook

### 6.2- Essential Books (Text Books)

Medical Microbiology.

Essential Immunology.

### 6.3- Recommended Books

A coloured Atlas of Microbiology.

### 6.4- Periodicals, Web Sites, ... etc

Microbiology

Immunology

<http://mic.sgmjournals.org/>

<http://www.microbes.info/>

<http://mansvu.mans.edu.eg/moodle/course/category.php?id=64>

## 7. Facilities Required for Teaching and Learning

1. Adequate infrastructure: including teaching places (teaching classes, halls & laboratories) comfortable desks, good sources of aeration, bathrooms, good illumination and safety & security tools. Facilities used for isolation, staining and culturing the different microbes.
2. Teaching tools: including screens, computers with CD (r/w), data show, projectors, flip charts, white boards, video player, digital video, camera, scanner, copier, colour & laser printers.
3. Computer program: for designing and evaluating MCQs.

**Course Coordinator:** Dr. Ekram Abd El Rahman

**Head of Department:** Dr. Abeer Shenief

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised :**1/2/2018

## Course Specifications of Clinical and Chemical Pathology for Master Degree of Parasitology

Sohag University

Faculty of Medicine

1. Program(s) on which the course is given: Master degree in Parasitology
2. Optional element of program: 1<sup>st</sup> part
3. Department offering the program : Department of Medical Parasitology
4. Department offering the course: Clinical and Chemical Pathology
5. Academic year / 1<sup>st</sup> part of Master degree of Medical Parasitology
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### B. Basic Information

**Title:** Clinical and Chemical Pathology

**Code:** CL.P 0516-200

Total hours

Lectures	Practical	Total hour	Credit hour
135	120	255	13

### C. Professional Information

#### 1. Overall Aims of Course

By the end of this course the student should have the professional knowledge and skills of haematology, immunology, clinical chemistry and microbiology to support his /her study of the main specialty.

#### 2. Intended Learning Outcomes of Course (ILOs)

The curriculum consists of theoretical, practical and training courses.

##### a) Knowledge and understanding:

By the end of this course the student should be expected to

- a1. Review their in formations about the physiology of blood cells (RBCs, WBCs and platelets) and homeostasis.
- a2. Review their in formations about the anatomy of the lymphatic and hematopoietic organs.
- a3. Enumerate the important causes, presentation and management of various types of anemia.
- a4. Enumerate causes, manifestation and management of bleeding and coagulation disorders.
- a5. Recognize various parasitic diseases in different samples.
- a6. Recognize chemical and immunological changes associated with various diseases especially parasitic diseases.
- a7. Enumerate recent advances in diagnosing various hematological disorders as bone marrow transplantation, immunological treatment.

##### b) Intellectual skills:

By the end of this course the student should be expected to

- b1. To interpret lab investigations as blood picture, bone marrow examination, results of lymph node, spleen biopsy, and tests for coagulation disorders.
- b2. Examine lymph nodes, liver and spleen and to know causes and management of lymphadenopathy, hepatomegaly, and splenomegaly.
- b3. Differentiate between samples of parasitic infection and other samples.

**c) Practical skills:**

By the end of this course the student should be able to:

- c1. Perform a complete hematological examination.
- c2. Perfect different staining methods.
- c3. Perform complete urinary, sputum and fecal examinations.
- c4. Perform serological tests for detection of parasitic antibodies or antigens

**d) General and Transferable Skills**

By the end of this course the student should be expected to

- d1. Work in a team.....
- d2. Communicate well with his colleagues, top management and subordinates.....
- d3. Use computers in conducting researches

**3. Course titles:**

Topics	No of hours	Hours of lectures (135hs)	Practical (120hs)
Clinical haematology: - Indications for blood transfusion. - Hazards of blood transfusion. - Parasites in blood. -Anemias: -Iron deficiency anemia -Megaloplastic anemia -Hemolytic anemias -Aplastic anemia. - ERS. - WBCs production. - Pathological changes in the WBCs (lymphomas and leukemias	25	15	20
Normal haemostasis. Disorders of coagulation and thrombosis:. -Hemophilias -Thrombophilias -How to investigate a case of bleeding.	15	10	5
Anticoagulants	20	10	10
Clinical Chemistry: - Carbohydrates.	20	10	10
- Body fluids - Plasma proteins and liver disorders.	25	10	15
- Kidney function	20	10	10
Clinical microbiology: - Methods of collecting samples and criteria of rejection.	20 15	10 5	10 10

- Staining and culture media.			
- Parasites in urine and stools	15	5	10
- Medically important cases: - a- fever b- diarrhea. c- UTLs. d- Meningitis.	30	20	10
Clinical immunology: - Types of antigen and antibody reactions.	10	10	
- Diagnosis of infectious diseases	14	10	4
- Immunological aspects of parasitic diseases	16	10	6
<b>Total</b>	<b>255</b>	<b>135</b>	<b>120</b>
<b>Credit</b>	<b>13</b>	<b>9</b>	<b>4</b>

#### 4. Teaching and Learning Methods

- 4.1 - Lectures
- 4.2- practical lessons (in the University hospital lab.).....
- 4.3-...searches in the library for Text Books in case taking...
- 4.4-...searches in computers.....

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSCE	-Practical skills, intellectual skills General transferable skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

Assessment 1 Final written Examination	24 w term.
Assessment 2 Structured Oral Exam	24 w term.
Assessment 3 OSPE	24 <sup>th</sup> w exam

#### Weighting of Assessments

Final written Examination	50 %
Structured Oral Exam.	30 %
OSPE	20 %

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Total 100%

Any formative only assessments regular oral exams

#### 6. List of References

6.1- **Cheesbrough, M. (1987):** Medical laboratory manual for tropical countries.

#### 6.3- Recommended Books:

#### 6.4- Periodicals, Web Sites, ... etc

<http://www.ncbi.nlm.gov>....

<http://www.google.com>.....  
<http://Freemedicaljournals.com>....

### **7. Facilities Required for Teaching and Learning**

- Adequate infrastructure: including teaching places (teaching classes, halls & laboratories) comfortable desks, good sources of aeration, bathrooms, good illumination and safety & security tools.
- Teaching tools: including screens, computers with CD (r/w), data show, projectors, flip charts, white boards, video player, digital video, camera, scanner, copier, colour & laser printers.
- Computer program: for designing and evaluating MCQs.

**Course Coordinator:** Dr/Lila Muhammed.

**Head of Department:** Dr. Hsnaa Aboelwafa

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised:**1/12/2018

## Course Specifications of Medical Biochemistry for master degree in Medical parasitology

**Sohag University**

**Faculty Of Medicine**

1. Program(s) on which the course is given: MSc. in Medical parasitology
2. Optional element of program
3. Department offering the program (Medical parasitology Department)
4. Department offering the course (Medical Biochemistry Department)
5. Academic year / Level: Post graduate, master degree in Medical parasitology (first part)
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### A- Basic Information

**Title:** Medical Biochemistry

**Code:** BIO 0516-200

Total hours

Lectures	Practical	Total hour	Credit hours
135	120	255	13

### B- Professional Information

#### 1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the biochemistry and the metabolic bases of the parasitological diseases, and able to diagnose any vitamin and calcium regulating hormones deficiency.

#### 2. Intended Learning Outcomes of Course (ILOs)

##### a) Knowledge and Understanding:

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

- a1. List the biochemical importance of intermediary metabolism (Anabolic and catabolic)
- a2. The importance of clinical biochemistry
- a3. Explain the role of vitamin, Minerals
- a4. Mention and explain hormonal action

##### b) Intellectual Skills

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

- b1. Diagnosis the affected biochemical deficiency
- b2. Integrate basic biochemical and physiological facts with clinical data
- b3. How to diagnose and treat as early as possible

##### c) Professional and Practical Skills

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

- c1. To identify the biochemical defect
- c2. To perform some laboratory tests for early diagnosis.

##### d) General and Transferable Skills

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

- d1. Acquiring skills to use computer to enter biochemistry web sites and self learning.
- d2. Team working for accurate diagnosing of diseases using internet.
- d3. Utilize computers in conducting research and to Collect scientific data.
- d4. Use standard computer programs effectively (window, office programs).



### 3. Contents

Topics	Total hours	lectures	practical
(1) Biological oxidations include: -General consideration. -Electron transport. -ATP-synthesis. -Translocations. -Superoxide dismutase.	13	7	6
(2) Glycolysis and citric acid cycle: - General consideration. -Enzyme structure and reaction mechanisms. -Regulation mechanisms and biomedical importance.	13	7	6
3) Other Pathways Carbohydrate Metabolism: a- Pentose –phosphate pathway and Gluconeogenesis. -General considerations -Enzyme reaction mechanisms. -Regulation mechanisms -Genetic diseases. B-Glycogen Metabolism: - General considerations - Glycogen Synthetase and phosphorylase: structure and catalytic activities. -Regulation -Genetic diseases C-Metabolism of other hexoses and biosynthesis of mucopolysaccharides.	13	7	6
(4) Fat metabolism) General considerations. -Fatty acid oxidation and fatty acid biosynthesis. - Enzymes and reaction mechanisms for biosynthesis of cholesterol and related derivatives, phospholipids, glycolipids and related compounds. -Eicosanoids metabolism. -Adipose tissue metabolism. -Lipid transport in plasma: Lipoproteins: assembly and degradation, biomedical importance. -Genetic diseases.	13	7	6
(5) Protein metabolism: -General consideration -Amino acids degradation: General reaction, nitrogen disposal and ammonia disposal. -Nitrogen fixation. -One carbon metabolism. -Individual amino acids metabolism.	13	7	6

6) Integration of metabolism: - Mechanisms and regulation	13	7	6
7) Metabolism of nucleotides: -General considerations -Purin and pyrimidine biosynthesis. -Ribonucleotide reductase –thioredoxin and Glutaredoxin, Thymidylate synthase and dihydrofolate reductase -Uric acid -Genetic diseases.	13	7	6
8) Porphyrin metabolism and hemoglobin biosynthesis and catabolism	13	7	6
(9) Mineral metabolism Tissue chemistry	13	7	6
(10)A- Eukaryotic chromosomes Gene Expression: -Nucleosome and chromatin. -Mitochondrial DNA. -DNA structure :replication and repair: -Structure. -Nucleases and ligases. -DNA topology and topoisomerases. -DNA polymerases. -Origin and direction of replication. Biochemistry of osteoarthritis	13	7	6
(11) Hormones -Classification, mechanisms of actions. -Pituitary and hypothalamic hormones. -Thyroid and parathyroid hormones. -Hormones of the adrenal cortex and medulla. -Hormones of the Gonads. -Hormones of the pancreas and G.I.T. Biochemistry of osteoporosis	13	7	6

12)-Tuomour markers.	13	7	6
13) Metabolism of xenobiotics.	13	7	6
(14)Body fluid : -Blood, urine,-semen, C.S.F, bile, gastric juice, milk.	8	2	6
(15)Minerals: (calcium.phosphate,Na,k,mg,Cu,iron,zinc,iodine ,mercury,Cd,florid,lead ,and others trace elements	13	7	6
(16)Immnglobulines	13	7	6
(17)Physical shemistry	13	7	6
(18)Free radicals	13	7	6
(19)Enzymes: -kinetics -Mechanism of action Regulation -	13	7	6
(20)Vitamin: -Water soluble vitamin. Fat soluble vitamin -Immunoglobulin -Steatorhea -Fate of ammonia	13	7	6
Total	255	135	120
Credit	13	9	4

#### 4. Teaching and Learning Methods

- 4.1- Lectures
- 4.2- Searches in computers (assignments) (d1,d3,d4)
- 4.3- practical

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSPE	-Practical skills, intellectual skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

1. Assessment 1.....Final written exam..... Week: 24
2. Assessment 2.....Final Structured Oral Exam .....Week: 24
3. Assessment 3.....Final OSPE..... Week: 24
4. Assessment 4..... Attendance and absenteeism throughout the course, Field convoy's participation

## Weighting of Assessments

Final written examination	50%
Oral Examination	30%
OSPE	20%
Total	100 %

## 6. List of References

### 6.1- Course Notes

Department books

### 6.2- Essential Books (Text Books)

1. Text book of medical biochemistry with clinical Devlin, JM 1994
2. Harper's biochemistry, Murray, RK 2005

### 6.3- Recommended Books

1. Lectures notes on clinical biochemistry, Whitby et al 1993
2. Lippincott's illustrated reviews biochemistry, Champe, PC, Harvey, RA, 2005

### 6.4- Periodicals, Web Sites, ... etc

1. <http://www.ncbi.nlm.gov/>
2. <http://www.vlib.org/>
3. [www.genome.ad.jp/kegg/regulation](http://www.genome.ad.jp/kegg/regulation).
4. Findarticle.com
5. Freemedicaljournals.com

## 7. Facilities Required for Teaching and Learning

1. Adequate infrastructure: including teaching places (teaching classes, halls & laboratories) comfortable desks, good sources of aeration, bathrooms, good illumination and safety & security tools.
2. Teaching tools: including screens, computers with CD (r/w), data show, projectors, flip charts, white boards, video player, digital video, camera, scanner, copier, colour & laser printers.
3. Computer program: for designing and evaluating MCQs.

**Course Coordinator: Dr. Aida Abdeen**

**Head of Department: Dr. Nagwa Sayed Ahmed Hassan**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018**

## Course Specifications of Community Medicine and public Health for Master degree in Medical Parasitology

**Sohag university**

**Faculty of Medicine**

1. Program on which the course is given: Master degree in Medical Parasitology
2. Major or Minor element of programs: minor
3. Department offering the program: Medical Parasitology
4. Department offering the course: Community Medicine and public Health
5. Academic year / Level; 2nd part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### A. Basic Information

**Program title:** Community Medicine and public Health

**Code:** COM 0516-200

#### Total hours

Lectures	Practical	Total hour	Credit hour
135	120	255	13

### B. Professional Information

#### 1. Overall Aims of Course

The aim of this course is to provide the postgraduate student with the medical knowledge and skills essential for practice of specialty and necessary to gain further training and practice in the field of Parasitology through providing:

1. Scientific knowledge essential for practice of Parasitology according to the international standards.
2. Active participation in community needs assessment and problems solving.
3. Maintenance of learning abilities necessary for continuous medical education.

#### 2. Intended Learning Outcomes of Courses (ILOs)

##### a) **Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Explain the three interacting ecological factors—agent(bacteria, parasites, viruses, ect....), host, and environment—affecting the occurrence of disease.
- a2. List essential public health functions.
- a3. Define patterns of care as preventive and curative, and describe the levels of preventive care.
- a4. Define basic components of clinical epidemiology and its basic components.
- a5. Describe the public health surveillance system and its use in the community setting.
- a6. Explain different methods for prevention and control and Define methods of prevention and control for different epidemiological problems in the community.
- a7. List risk factors relevant to selected non-communicable diseases e.g cancer.
- a8. Describe the infectious cycle and Identify the infectious cycle for each of the infectious diseases.

##### b) **Intellectual Skills**

By the end of the course, the student is expected to be allowed to:

- b1. Collect and verify data from different sources about epidemiology and prevalent epidemiological problems

- b2. Select the appropriate diagnostic and solving methods for the prevalent epidemiological problems.
- b3. Link between knowledge for professional problems' solving in the area of epidemiology.
- b4. Analyze researches and issues related to epidemiology.

**c) Professional and Practical Skills:**

By the end of the course, the student is expected to practice the following:

- c1. Master the basic and professional skills in the area of epidemiology.
- c2. Write reports to describe various epidemiologic problems.
- c3. Conduct Health Surveys for infectious diseases aspects.
- c4. Diagnose the epidemiological aspects of an epidemic of infectious or non infectious diseases among the community.

**d) General and Transferable Skills:**

By the end of the course, the student is expected to be able to:

- d1. Use information technology to serve the development of professional practice in the area of epidemiology
- d2. Use different sources to obtain information and knowledge about prevalent epidemiological problems in the community.
- d3. Learn himself continuously in the field of epidemiology.

**3. Contents**

Topic	Total hours	Lecture	Practical
Prevention and Control aspects of the ds	10	0	0
Levels of Prevention in the community	10	10	0
Chain events of Infectious cycle	10	0	0
Epidemiology of selected communicable diseases: Viral ds: Hepatitis	10	5	0
Polio	10	0	0
Diarrheal ds	10	0	0
Malaria, Filaria, Yellow fever	10	0	0
Dengue, Rift Valley,	10	0	0
Viral heamorrahgic fevers.. Ebola, Lassa, Merburg.....etc	10	0	0
AIDs	0	0	-
Rabies	10	0	0
Others	0	0	-
Bacterial ds: - Tetanus	10	0	0
Typhoid & Paratyphoid	10	0	0
Food Poisoning	10	5	0
Tuberculosis	10	0	0
Brucellosis	10	0	0
Others: Shistosomiasis	10	0	0
Other Parasitic infestation	10	0	0

Locally endemic ds	١٠	5	٥
Diseases of Public Health Importance	١٠	٥	٥
Epidemiology and risk factors of non-communicable diseases	١٠	٥	٥
Cancer	١٠	5	٥
Emerging and Remerging ds	١٠	5	٥
SARS	١٠	٥	٥
Avian flue	١٠	٥	٥
<b>Total</b>	<b>٢٥٥</b>	<b>١٣٥</b>	<b>١٢٠</b>
<b>Credit</b>	<b>١٣</b>	<b>٩</b>	<b>٤</b>

#### 4. Teaching and Learning Methods

4.1- Lectures

4.2- Computer search assignments

4.3- Field training (Community convoys)

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSPE	-Practical skills, intellectual skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

Assessment 1.....Final written exam..... week: 24

Assessment 2.....Final Structured Oral Exam .....week:24

Assessment 3.....Final OSPE..... week:24

Assessment 4..... Attendance and absenteeism throughout the course, Field convoy's participation

Assessment 5 ..... Computer search assignment performance

#### Weighting of Assessments

Final written examination	%	50
Oral Examination	%	30
OSPE	%	20
Total	100	%

Formative only assessments: Attendance and absenteeism throughout the course, Field convoy's participation, Computer search assignment performance

#### 6. List of References

##### 6.1- Course Notes

Lecture notes prepared by the staff members in the department

## **6.2- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc.

## **6.3- Recommended Books**

- 1- Dimensions of Community Health, Boston Burr Ridge Dubuque.
- 2- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.
- 3- Epidemiology in medical practice, 5<sup>th</sup> edition. Churchill Livingstone. New York, London and Tokyo.

## **6.4- Periodicals, Web Sites, ... etc**

- 1-American Journal of Epidemiology
- 2-British Journal of Epidemiology and Community Health
- 3- WWW. CDC and WHO sites

## **7. Facilities Required for Teaching and Learning:**

- 1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
- 2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

**Course Coordinator: Dr/Rasha Abd El Hameed**

**Head of Department: Prof/ Ahmed Fathy Hammed**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018**



# Course Specifications of Tropical Medicine & Gastroenterology for Master Degree of Parasitology

Sohag University

Faculty of Medicine

1. Program (s) on which the course is given: Master degree in Parasitology
2. Optional element of program: 1<sup>st</sup> part
3. Department offering the program : Department of Medical Parasitology
4. Department offering the course: Tropical Medicine & Gastroenterology
5. Academic year / 1<sup>st</sup> part of Master degree of Medical Parasitology
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Tropical Medicine & Gastroenterology

**Code:** TRO 0516-200

### Total hours

Lectures	Practical	Total hour	Credit hour
135	120	255	13

## B. Professional Information

### 1. Overall Aims of Course

- To have basic knowledge about fevers and its common causes
- To have basic knowledge about etiology, pathogenesis, clinical picture, complications and management of the most common infectious diseases
- To understand the most common gastrointestinal and hepatic diseases especially those prevail in our country and be able to diagnose and manage them.
- To be able to take a complete medical history from patients.....
- To know the symptomatology of gastrointestinal system and how to analyze them to reach a provisional diagnosis.....
- To have a basic knowledge about different methods of clinical examinations of patients and details of abdominal examination
- To be able to link clinical to laboratory data

### 2. Intended Learning Outcomes of Course (ILOs)

#### a). Knowledge and Understanding:

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

- a1. To know the common infectious, hepatic and gastrointestinal diseases worldwide and the most common diseases and public health problems in our country.
- a2. Enumerate the causation of diseases and new concepts in their pathogenesis.
- a3. Enumerate the clinical picture, complications and differential diagnosis of common infections
- a4. Enumerate the importance of good history taking as a first step to solve a medical problem.
- a5. List how to be a good observer
- a6. Mention learn how to look for physical signs and how to interpret them.
- a7. Enumerate the common diagnostic, laboratory, radiological and other techniques

- a8. Enumerate the various therapeutic methods/ alternatives used for common diseases (supportive therapy, nutrition, pharmacotherapy, surgical treatment etc...)
- a9. Describe general methods for health promotion and disease prevention.

**b).Intellectual Skills**

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

- b1. To make a good doctor-patient relationship.....
- b2. To take a thorough medical history.....
- b3. To interpret data acquired through history taking to reach a provisional diagnosis
- b4. To interpret physical findings and correlate them with patient's symptoms.
- b5. Identify problems and find solutions
- b6. Select from different diagnostic techniques the ones that help to reach a final diagnosis.
- b7. Select the most helpful laboratory investigation to confirm the diagnosis.
- b8. To have the ability to innovate nontraditional solutions to problems.

**c). Professional and Practical Skills**

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

- c1. Perform general and abdominal examination of patients .
- c2. Interpret, conclude and discuss data collected from history and examination
- c3. Diagnose common infectious diseases(parasitic, bacterial and viral) and be able to differentiate them clinically and laboratory.
- c4. Perform basic diagnostic and therapeutic techniques and measures (pulse, temperature, giving injections and intravenous fluids, taking aspirations from pathological body fluids....)....
- c5. Recognize patients with life threatening conditions and initiate the proper management and change it according to patient's needs.

**d).General and Transferable Skills**

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

- d1. Work in a team.....
- d2. Communicate well with his colleagues, top management and subordinates.....
- d3. Establish a good patient-physician relationship.
- d4. Use computers in conducting researches

### 3. Contents: Lectures (135hours + 120 clinical)

Topics	No of Hours	lectures	practical
Diagnosis of a case of fever	10	5	5
Pyrexia of unknown origin	10	5	5
Nosocomial infections	10	5	5
Helminthic Diseases Schistosomiasis Paragonimus westermani Fascioliasis Clonorchis sinensis Heterophyes heterophyes Taeniasis Hymenolepis nana, diminuta Diphylobothrium latum Hydatid disease Ancylostomiasis Ascariasis Enterobiasis Strongyloidiasis Cappilariasis Tissue larva migrans Trichinosis Filariasis Loaisis Onchocerciasis Dracanculus medinensis	25	15	5
Treatment of helminthic infections	10	5	5
Protozoal Diseases Malaria Babesiosis Amaebiasis Giardiasis Balantidiasis African Trypanosomiasis American Trypanosomiasis Toxoplasmosis Leshmaniasis	20	15	5
Arthropod borne infections	10	5	5
Infectious and non-infectious diarrhea	10	5	5
Salmonella infections	10	5	5
Brucellosis	10	5	5
Shigellosis	10	5	5
Tuberculosis of the GIT	10	5	5
Cholera	10	5	5
Cholestasis	10	5	5
Zoo noses	10	5	5
Tropical Liver Diseases	10	5	5

Cardiovascular Diseases in the Tropics	10	5	5
Neurological Manifestations of Tropical Diseases	10	5	5
Haematological Disorders in the Tropics	10	5	5
Emergencies in Fevers	10	5	5
Infections in the immunocompromized host	5	5	-
Immunizations	5	5	-
Precautions taken by travelers to tropical areas.	5	5	-
<b>Total</b>	<b>155</b>	<b>135</b>	<b>120</b>
<b>Credit</b>	<b>13</b>	<b>9</b>	<b>4</b>

#### 4. Teaching and Learning Methods

- 4.1 - Lectures
- 4.2- practical lessons (ward and class rounds)
- 4.3- Searches in the library for Text Books in case taking...
- 4.4- searches in computers.

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSCE	-Practical skills, intellectual skills General transferable skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

- Assessment 1: Written Exam: 24w
- Assessment 2: Structured Oral Exam 24w
- Assessment 3: OSCE at 24 w.

#### Weighting of Assessments

Final written Examination	50 %
Structured Oral Exam.	30 %
OSCE	20%
Total	100%

Formative only assessments Observation of attendance and absenteeism and Computer search assignment.

#### 6. List of References

6.1- Davidson text Book of Medicine.

6.2- Essential Books (Text Books): Hutchison Book for case taking.

6.3- Recommended Books

Hunter's Tropical Medicine

Current diagnosis & Treatment in Gastroenterology.

Sheilla Sherlock (Text Book) of Hepatology

6.4- Periodicals, Web Sites, etc

<http://www.ncbi.nlm.gov....>

<http://www.google.com.....>

**7. Facilities Required for Teaching and Learning**

1. Adequate infrastructure: including teaching places (teaching classes, halls & laboratories) comfortable desks, good sources of aeration, bathrooms, and good illumination and safety & security tools.
2. Teaching tools: including screens, computers with CD (r/w), data show, projectors, flip charts, white boards, video player, digital video, camera, scanner, copier, colour & laser printers.
3. Computer program: for designing and evaluating MCQs.

**Course Coordinator:** Dr/ Mahmoud Saif Al-Islam Abd Elfatah.

**Head of Department:** Dr/ Gada Moustafa

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised:**1/12/2018

## Course Specifications of Applied biostatistics (with computer use) and Research Methodology in Master degree of Medical Parasitology

**Sohag University**

**Faculty of Medicine**

1. Program title : Master degree in Parasitology
2. Major/minor element of the program : Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: **Medical** Parasitology
5. Academic year /level : 1st part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### A. Basic Information

**Title:** Master degree in Parasitology Biostatistics and Computer use for health services and Research Methodology

**Code:** COM 0516-200

**Total Hours:**

Title	Lectures	Practical/ surgical	Total	credit
Applied biostatistics and computers & Research methodology	15	30	45	2

### B. Professional Information

#### **Applied Biostatistics Module:**

##### **1. Overall Aims of Course**

- a. To influence the students to adopt an analytical thinking for evidence based medicine.
- b. To use precisely the research methodology in researches and computer programs SPSS, Epi Info and Excel in data analysis.

#### **Research Methodology Module:**

##### **1. Overall Aims of Course**

The aim of this course is to provide the postgraduate student with the advanced medical knowledge and skills essential for the mastery of practice of specialty and necessary to provide further training and practice in the field of Public health and Community Medicine through providing:

1. Recent scientific knowledge essential for the mastery of practice of Public Health and Community Medicine according to the international standards.
2. Skills necessary for preparing for proper diagnosis and management of community problems, skills for conducting and supervising researches on basic scientific methodology.
3. Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problems identification.

5. Maintenance of learning abilities necessary for continuous medical education.
6. Upgrading research interest and abilities.

## 2. Intended Learning Outcomes of Courses (ILOs)

### Applied Biostatistics Module:

#### a) **Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Mention different programs of analysis of data and statistical packages
- a2. Define the recent advances of sources of data and methods of collection.
- a3. Summarize data, construct tables and graphs
- a4. Calculate measures of central tendency and measures of dispersion
- a5. Describe the normal curves and its uses
- a6. Illustrate selected tests of significance and the inferences obtained from such tests
- a7. Illustrate selected tests of significance for parametric and non parametric inferences
- a8. Identify factor analysis and discrimination analysis.

#### b) **Intellectual Skills**

By the end of the course, the student is expected to be allowed to:

- b1. Mention how to collect and verify data from different sources
- b2. Interpret data to diagnose prevalent problems Medical Parasitology

#### c) **Professional and Practical Skills:**

By the end of the course, the student is expected to practice the following:

- c1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of prevalent problems in Medical Parasitology

#### d) **General and Transferable Skills:**

By the end of the course, the student is expected to be able to:

- d1. Use appropriate computer program packages.
- d2. Use of different sources for information and knowledge about biostatistics.

### Research Methodology Module:

## 2. Intended Learning Outcomes of Courses (ILOs)

#### a) **Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.
- a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.
- a3. Describe the study design, uses, and limitations.
- a4. Mention the recent advances of principles, methodologies, tools and ethics of scientific research.
- a5. Explain the strategies and design of researches.
- a6. Describe bias and confounding.
- a7. Describe sampling techniques and list advantages of sampling
- a8. Identify principles of evidence based medicine.

#### b) **Intellectual Skills**

By the end of the course, the student is expected to be able to:

- b1. Conduct research studies that adds to knowledge.
- b2. Formulate scientific papers in the area of public health and community medicine
- b3. Innovate and create researches to find solutions to prevalent community health problems
- b4. Criticize researches related to public health and community medicine
- c) **Professional and Practical Skills:**  
By the end of the course, the student is expected to be able to:
  - c1. Enumerate the basic and modern professional skills in conducting researches in the area of public health and community medicine.
  - c2. Design new methods, tools and ways of conducting researches. .
- d) **General and Transferable Skills:**  
By the end of the course, the student is expected to be able to:
  - d1. Use of different sources for information and knowledge to serve research.
  - d2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

### 3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
<b>Applied Biostatistics Module:</b>			
Recent advances in collection, analysis and interpretation of data	3	1	2
-Details of Tests of significance: Proportion test	3	1	2
-Chi-square test	1.5	.5	1
-Student T test	1.5	.5	1
-Paired T test	1.5	.5	1
-Correlation	1.5	.5	1
-Regression	2	1	1
-ANOVA test	3	1	2
-Discrimination analysis	3	1	2
-Factor analysis	3	1	2
-Parametric and non parametric tests	4.5	.5	4
<b>Research Methodology Module:</b>			
Details of epidemiological studies (case control, cohort and cross sectional )	3	1	2
Clinical trials, Quasi experimental study	3	1	2
Bias and errors	2	1	1
Setting a hypothesis	1.5	.5	1
Recent advances in screening	1.5	.5	1
- Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	3	1	2
Setting an objective - Critical thinking	2	1	1



Formulation of papers	1.5	.5	1
<b>Total hours</b>	<b>45</b>	<b>15</b>	<b>30</b>
<b>Total Credit hours</b>	<b>2</b>	<b>1</b>	<b>1</b>

#### **4. Teaching and Learning Methods**

- 4.1- Lectures
- 4.2- Practical sessions
- 4.3- Computer search assignments
- 4.4- Computer application

#### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4Computer search assignment	- general transferable skills, intellectual skills

#### **Assessment Schedule**

- Assessment 1....Final written exam      Week: 24
- Assessment 2....Final oral exam      Week: 24
- Assessment 3    Attendance and absenteeism throughout the course
- Assessment 4    Computer search assignment performance throughout the course

#### **Weighting of Assessments**

Final-term written examination	50%
Final oral Examination	50%
Total	100%

**Formative only assessments: attendance and absenteeism and Computer search assignments performance.**

#### **6. List of References**

##### **Applied Biostatistics Module:**

##### **6.1- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

##### **6.2- Recommended Books**

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

##### **6.3- Periodicals, Web Sites, ...etc**

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

**Research Methodology Module:**

**6.1- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

**6.2- Recommended Books**

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

**6.3- Periodicals, Web Sites, ...etc**

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1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7.

**8. Facilities Required for Teaching and Learning:**

**Applied Biostatistics Module:**

- Adequate conditioned space for staff and assistants.
- Adequate conditioned teaching facilities.
- Audiovisual Aids: Data show, overhead and slide projectors and their requirements.

**Research Methodology Module:**

- 1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
- 2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

**Course Coordinator:** Dr/ Rasha Abd El-Hameed

**Head of Department:** Prof/ Ahmed Fathy Hamed

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised:**1/12/2018

## Course Specifications of Medical Parasitology for MSc of Medical Parasitology Degree

**Sohag University**

**Faculty of Medicine**

1. Program on which the course is given: MSc. Medical Parasitology
2. Major element of program.
3. Department offering the program: Medical Parasitology
4. Department offering the course: Medical Parasitology
5. Academic year / Level: graduates, passed 1st part, registered MSc. Medical Parasitology (2nd part).
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### A. Basic Information

**Title:** Medical Parasitology

**Code:** PAR0516-200

**Total hours**

Lectures	Practical	Total hours	Credit hour
210	300	510	24

### B. Professional Information

#### 1. Overall Aims of Course

By the end of the course the student should be able to have the professional knowledge of the parasites affecting human beings all over the world and particularly in Egypt, so to be able to efficiently diagnose and teach medical Parasitology to undergraduates.

#### 2. Intended Learning Outcomes of Course (ILOs):

The student is to be armed with Professional knowledge about the human parasites present in his locality as well as Egypt, surrounding countries and some idea to parasites all over the world. Each student should be able to recognize the morphological characteristics of each parasite to perform some laboratory tests needed for diagnosis and learn how to fix and examine properly parasitic slides.

##### a). Knowledge and Understanding:

By the end of the course the student should be able to:

- a1. Enumerate sufficient knowledge of the parasites affecting human beings all over the world and zoonoses.
- a2. Enumerate the understanding the geographical distribution and life cycle of each, inside and outside the body.
- a3. Enumerate the ability to differentiate between parasites on morphological bases.
- a4. Mention the knowledge to recognize the pathology, clinical symptoms and complications of each parasite.
- a5. Have the knowledge of the recommended laboratory tests needed for diagnosis of each case.
- a6. Have the knowledge of some of the drugs and instructions used for treating each case.
- a7. Enumerate the knowledge about control methods used against parasites.

- a8. Have sufficient knowledge about snails and their medical importance, especially of Egypt.
- a9. Have the knowledge of parasitic immunity basis.

**b). Intellectual Skills:**

By the end of the course the student should have the ability to:

- b1. Differentiate between parasites affecting the same organ.
- b2. Differentiate between parasites present in the same sample.
- b3. Differentiate between parasites inhabiting the same geographical location.

**c). Professional and Practical Skills:**

By the end of the course the student should have the ability to:

- c1. Identify the infective and the diagnostic stages of the parasites
- c2. Identify some stages of the parasites.
- c3. Identify some of the medically important intermediate host especially those present in Egypt.
- c4. Perform one or more of the following skills:
- c5. Perform some laboratory tests available in the department lab.
- c6. Perform available immunological tests.
- c7. Deal with lab animals: infecting, sacrifice, dissecting and examining.
- c8. collecting and rearing of snails or medically important arthropods.
- c9. A box of at least 75 prepared slides of different entities are required.
- c10. Attending and participating in scientific conferences, meetings, workshops and thesis discussion that update relevant recent topics in molecular biology, relevant biochemical and geno-typing of parasites, and emerging parasitic problems.

**d). General and Transferable Skills:**

By the end of the course the student should have the ability to:

- d1. Use the computer to enter parasitological web sites.
- d2. Can collect scientific data from the computer.
- d3. Can work in groups, as a leader or as a college.
- d4. Can collect data from medical centers and patients.
- d5. Can compile a review article about a specific subject. (90 hs.)

**3. Contents**

Topic	No. of total hours	Lecture	Tutorial/ Practical
Introduction	2	2	--
Helminthes Introduction+Trematoda introduction.	2	2	--
Fasciola	12	2	5
Dicrociliium+ Fasciolopsis buski	12	2	5
H. heterophyes	12	2	5
Schistosoma	16	6	5
Snails	16	6	5
Cestoda+ D. latum	12	6	5
Taenia	12	6	5
Echinococcus+ Hymenolepis+ Dipylidium	14	6	5
Nematoda+ Eterobius+ T. trichura+	14	6	5

Capillaria+ T. spiralis	14	6	5
Ascaris	14	6	10
Hook worms	7	6	5
S.stercoralis	12	6	10
Larva migrans	7	6	5
D. medenensis	7	6	5
Filarial; worms	15	10	5
Slide preparation	15	5	10
Helminthes total	215	60	100
Arthropoda Introduction	2	2	-
Dieptera+ Mosquitoes	15	5	5
Culicoides+ Phlebotomas	12	2	5
Brachycera	12	2	6
Myiasis & M. producing flies	12	2	6
Siphonaptera	12	2	6
Hemiptera	12	2	6
Anoplura	12	2	6
Arachnida introduction	12	2	6
Ticks	12	2	6
Mites	12	2	6
Pentastomida	12	2	6
Cyclops	12	2	6
Slide preparation	33	3	30
Arthropods total	180	30	100
Protozoa Introduction+ Amoebidae	13	8	5
Luminal flagellates	22	12	10
Haemoflagellates	20	10	5
Apicomplexa (Malaria + Babesia)	20	5	5
Apicomplexa (Toxoplasma+ others)	20	5	5
Ciliata+Microsporidia	15	5	5
Slide preparation	20	5	15
Protozoa	130	50	50
General immunology and Parasitology	30	10	10
Immunology and helminthes	47	27	10
Immunology and protozoa	58	28	20
Immunology and arthropods	15	5	10
Immunology	150	70	50
<b>Total</b>	<b>510</b>	<b>210</b>	<b>300</b>
<b>Credit</b>	<b>24</b>	<b>14</b>	<b>10</b>

#### 4. Teaching and Learning Methods

4.1-Lectures.

4.2- practical lessons.

4.3- Assignments.

4.4- attending and participating in scientific conferences, workshops and thesis discussion to acquire the general and transferable skills needed. (c8)

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2- Log book	- General transferable skills
5.3-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.4-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.5-OSPE	-Practical skills, intellectual skills
5.6 assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

Assessment 1 ...Review...	Week: 28-30
Assessment 2..... Log book...	Week: 100
Assessment 3.....slides box (75)...	Week ....100
Assessment 4.....practical notebook...	Week....120
Assessment 5.... Final written exam....	Week ...96....(36 month)
Assessment 7....OSPE.	Week...144-146
Assessment 8.....Final oral exam.....	Week....96

#### Weighting of Assessments

Periodic Examinations	=10% including:
Review...	week: 28-30= Pass
Log book...	week: 90 = 3%
Slides box (75)...	week ....96= 5%
Practical notebook...	week....96=2%

Final Examination	40%
Oral Examination.	20%
OSPE	20 %

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Total 100%

#### 6. List of References

##### 6.1- Lecture notes

##### 6.2- Essential Books (Text Books)

Medical Parasitology.

Essential Parasitology.

##### 6.3- Recommended Books

A coloured Atlas of tropical Medicine and Parasitology.

##### 6.4- Periodicals, Web Sites:

Parasitology Research Division of Biology, Kansas State University  
mri.sari.ac.uk/parasitology.asp  
British Society of Parasitology  
And others

#### **7. Facilities Required for Teaching and Learning**

- Adequate infrastructure: including teaching places (teaching classes, halls & laboratories) comfortable desks, good sources of aeration, bathrooms, good illumination and safety & security tools.
- Teaching tools: including screens, computers with CD (r/w), data show, projectors, flip charts, white boards, video player, digital video, camera, scanner, copier, color & laser printers.
- Computer program: for designing and evaluating MCQs.

**Course Coordinator:** Dr. aml Mostafa Ahmed

**Head of Department:** Prof Dr Hana Ahmed El Hady

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised:**1/12/2018