إعتماد توصيف مقررات برنامج الدكتوراه فى الطفيليات الطبية

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمى لدرجة الدكتوراه فى الطفيليات الطبية والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام المعنية

م	اسم المقرر	اسم منسق المقرر	التوقيع	اسم رئيس القسم	التوقيع
١.	الاحصاء الطبي والكمبيوتر	د./ أحمد فتحي حامد		د./ ايمان عبد الباسط محمد	
٢.	أساليب البحث العلمي	د./ أحمد فتحي حامد		د./ ايمان عبد الباسط محمد	
٣.	ميكروبيولوجيا	د./ ممدوح محمد عصمت		أ.د./ أحمد حسن عبد العزيز	
٤.	باثولوجيا	د./ فاطمة الزهراء صلاح الدين		د./ ايمان محمد صلاح الدين	
٥.	باثولوجيا اكلينيكية	د./ ليلي محمد يوسف		أ.د./ زينب محمد محمود	
٦.	كيمياء حيوية	د./ رضا صلاح يوسف		د./ نجوي سيد أحمد	
٧.	وراثة	د./ حكمت عصمان عبد العزيز		أ.د./ ايمان السيد ابو ضيف	
٨.	طب مجتمع	د./ أحمد فتحي حامد		د./ ايمان عبد الباسط محمد	
٩.	طب المناطق الحارة	د./ محمود سيف الاسلام		د./ ايهاب فوزي	
١٠	هستولوجيا	د./ حكمت عصمان عبد العزيز		أ.د./ ايمان السيد ابوضيف	
١١	الطفيليات الطبية	د./ ندي عبد الفتاح النادي		أ.د./ ماجده محمد عطية الناظر	

وكيل الكلية للدراسات العليا

عميد الكلية

Peer Revision

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

Program Specification of Medical Doctorate Degree of Medical Parasitology

Sohag University **Faculty of Medicine**

A. Basic Information

1. Program title: MD. Degree of Medical Parasitology
2. Program type: Single
3. Faculty: Faculty of Medicine
4. Department: Medical Parasitology
5. Coordinator:Dr. Nada Abd El Fattah El-Nadi.
6. Ass. Coordinator: Dr. Eman Khalaf Omran.
7. External evaluator: Prof. Dr. Fatma Galal.
8. Last date of program specifications approval: Faculty council No. 219, decree No. (8115)dated 19/12/2011, re-approval: Faculty council No. 228, decree No. 9801dated 10/9/2012.

B. Professional Information :

1. Program aims:

Our aim is to graduate competent parasitologists able to perform:

1. Perfect Professional application of scientific knowledge and skills essential for the practice and research work of medical parasitology.
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 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. elf learning, modern technological aids and research abilities necessary for continuous professional development and valuable addition to the field of medical parasitology
7. Ability to teach and train others to develop themselves in the field of medical Parasitology.
8. Having the ability to engage in further following researches and training in any branch of medical Parasitology.
9. Sound ethical and professional principles necessary for establishment of good communication with students and colleagues.
10. Proper decision making in different professional situations.

2. Attributes of the postgraduate:

1. Efficient in carrying out the basics and methodologies of scientific research in Parasitology.
2. The continuous working to add new knowledge in his field.

3. Applying the analytical course and critical appraisal of the knowledge in his specialty and related fields.
4. Merging the specialized knowledge with the other related knowledge with conclusion and developing the relationships in between them.
5. Showing a deep awareness with the ongoing problems, theories, and advanced sciences in his specialty.
6. Determination of the professional problems and creating solutions for them.
7. Efficient in carrying out the professional skills in his specialty.
8. Using advanced suitable technologies which serves his practice.
9. Efficient communication and leadership of team work in his specialty.
10. Decision making through the available information.
11. Using the available resources efficiently and working to find new resources.
12. Awareness with his role in the development of the society and preserve environment.
13. Behaving in a way which reflects his credibility, accountability, and responsibility.
14. Keeping continuous self development and transfer his experiences and knowledge to others.

3. Intended learning outcomes (ILOs):

a) Knowledge and understanding

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

a1. Have a up to date knowledge about parasites affecting human beings allover the world and zoonoses.
a2. Enumerate the geographical distribution (including recent changes and the environmental effects) and life cycle of each, inside and outside the body.
a3. Describe the detailed morphology of each parasite**.**
a4. Enumerate the pathology, clinical symptoms and complications caused by parasites**.**
a5. Describe laboratory tests needed for diagnosis of each case.
a6. List drugs and instructions used for treating each case.
a7. List control methods used against parasites.
a8. List snails and their medical importance, especially of Egypt.
a9. Mention parasitic immunity bases.
a10. Enumerate molecular genetics as related to medical parasitology.
a11. Mention the environmental effects as related to medical parasitology.
a12. Describe moral and legal aspects in the profession of medical parasitology.
a13. Enumerate bases and standards of performance in the profession of medical parasitology.
a14. Enumerate the recent advances in biostatistics and computer.
a15. Enumerate the recent advances of principles, methodologies, tools and ethics of scientific research.

b) B. Intellectual Skills:

By the end of this program the MD. graduate 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. Criticize in a scientific pattern at least 15 published papers in the different branches of Medical Parasitology (parasite distribution and public health or statistics, lab. Animals and pathology of parasites or drugs, parasites and immunology, snails….etc

b8. Present creative and genuine ideas, lectures, reviews, projects or others adding to the field of medical parasitology.
b9. Be persuasive and can support his/her ideas with solid scientific facts.
b10. Perform professional decision making and planning for different professional scenarios.
b11. Conduct research studies that adds to knowledge.
b12. Formulate scientific papers in the area of Medical Parasitology

c) Professional and Practical Skills:

By the end of this program the MD.graduate should be able to:

c1. Recognize of the infective and the diagnostic stages of the parasites.
c2. Identify of some stages of the parasites**.**
c3. Identify of some of the medically important intermediate host especially those present in Egypt.
c4. Perform some laboratory tests available in the department lab.
c5. Perform available serological tests.
c6. Deal with lab animals: infecting, sacrifice, dissecting and examining within ethical and moral borders.
c7. Collect and rear of snails or medically important arthropods.
c8. A box of at least 75 prepared slides of different entities are required.
c9. Attend 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.
c10. Design new methods, tools and ways of professional practice
c11. Create new successful ways in conducting informations and assessment of the performance of the students.
c12. Produce new ideas for diagnosis or control in his/her field.

d) General and Transferable Skills:

By the end of this program the MD. graduate should be able to:

d1. Use appropriate computer program packages.
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 (during teaching process).
d5. Skillfully practice communication skills in learning, teaching and scientific communications.
d6. Use the sources of biomedical information to remain current with advances in knowledge and practice (self learning).
d7. Maintain a professional image in manner, dress, speech as well as the interpersonal relationships.
d8. Work within limits of knowledge and experience.
d9. Participate in the medical progress by having the basis of medical research studies.
d10. Participate in related scientific meetings.
d11. Work coherently and successfully as apart of a team

4. **Academic Standards:**

Sohag faculty of medicine adopted the general National Academic Reference Standards (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for postgraduate programs. This was approved by the Faculty Council decree N0.6854, in its cession N0.177 Dated: 18/5/2009. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were approved by Faculty Council decree N0.7528, in its cession N0.191, dated:

15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. Dated 26-12-2011

5. **Curriculum structure and contents:**

5.a- Program duration: 7 semesters.

5.b- Program structure:

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

	Hours/week		
Subject	**Lectures**	**Practical**	**Clinical**
First Part:			
Minors:			
Bio Statistics & Computer	2	2	
Research Methodology	2	2	
optional courses:			
Biochemistry	4		
Tropical Medicine	4		
Clinical Pathology	4		
Microbiology and Immunity	4		
Public health & Community Medicine	4		
Histology	4		
Medical genetics	4		
Pathology	4		
Second Part:			
Medical Parasitology	5	7.66	

code	Item		No	%
b.i	Total credit hours	Compulsory	90	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses		7	7.8
b.iv	credit hours of courses of social sciences and humanities		0	0
b.v	credit hours of specialized courses:		60	66
b.vi	credit hours of other course			
b.vii	Practical/Field Training		8	8.9%
b.viii	Program Levels (in credit-hours system): Level 1: 1st part Level 2: 2nd Part Level 3: Thesis		 15 52 15	 16.7 57.8 16.7

6. **Program Courses** * 3courses are compulsory + 2 optional courses

6.1- Level of program:

Semester…1…..

First part :

Course title	Total No. of credit hours	No. of hours / week			Programme ILO Covered
		Lect.	practical	clinical	
Minors:					
Bio Statistics & Computer	3	2	2		a14., b4,b6,c9,d1,d2
Research Methodology	3	2	2		a15, b6,b7,b11,b12,c9,d2,d11
optional courses:					
Medical Biochemistry	4c.h	4			a5,a9,c4,c5,d2,d4,d6
Tropical Medicine& Gastroenterology	4c.h	4			a4,a6,b1,d2,d4,d6.d8
Clinical and Chemical Pathology	4c.h	4			a5,a9,b2,c4,c5,d4,d6,d8
Medical Microbiology and Immunology	4c.h	4			a5,a9,b1,b2,c1,c2, d2,d8
Community Medicine and public Health	4c.h	4			a1,a2, a7,a11, a12, b3,b4,b6, b7,b8, d2,d3, d4,d5, d6, d7,d8,d9
Histology	4c.h	4			a5,a9,c4,c5,d2,d4,d6
Medical genetics	4c.h	4			a10,b5,b7,c4, c5,d2,d4,d6, d9, d10

Second part

Pathology	4c.h	4			a5,a9,c4,c5,d2,d4,d6
Medical Parasitology	12.66	5	7.66		a1,a2,a3,a4,a5,a6,a7,a8,a9 ,a10,a11,a12,a13,b1,b2,b3 ,b4,b6,b7, b8,b9, c1,c2,c3,c4,c5,c6.,c7, c8,c9,c10,c11,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 know how to speak & write English well
- Candidate should have computer skills**.**
- Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

II- Specific Requirements

- Master degree in Medical Parasitology with at least "Good Rank".

8. Regulations for Progression and Program Completion

Duration of program is 90 credit hours (≥7 semesters ≥3.5 years), starting from registration till acceptance of the thesis; divided to:

First Part: (15 Credit hours ≥6 months ≥1 semester):

- Program-related basic science, 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 1st part.
- Two sets of exams: 1st in October — 2nd in April after fulfillment of the credit hours.
- At least 60% of the written exam and 60% of the total oral and practical/clinical 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.
- GPA of ≥1.3 is needed to pass this level (semester).

Second Part: (50-60 Credit hours ≥24 months= 4 semesters):

- Program related specialized science of Medical Parasitology courses. At least 24 months after passing the 1st part should pass before the student can ask for examination in the 2nd part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (8 Credit hours; with obtaining ≥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= 8 Cr. Hr. X 60 working Hrs = 480 Working Hrs.
  - Collection of working Hrs. is as following:

Activity		**Hrs**
Grand rounds	**اجتماع علمى موسع**	**6**
Training courses	**دورات تدريبية**	**12/ day**
Conference attendance	**حضور مؤتمرات علمية** **داخلى** **خارجة**	 **12/day** **18/day**
Thesis discussion	**حضور مناقشات رسائل**	**6**
Workshops	**حضور ورش عمل**	**12/day**
Journal club	**ندوة الدوريات الحديثة**	**6**
Seminars	**لقاء علمى موسع**	**6**
Morbidity and Mortality conference	**ندوة تحليل المخاطر المرضية أوالوفاة**	**6**
Self education program	**برنامج التعليم الذاتى**	**6**

- Two sets of exams: 1st in October - 2nd in April.
- At least 60% of the written exam is needed to be admitted to the oral and practical exams.
- 4 times of oral and practical exams are allowed before the student has to re-attend the written exam.

Third Part (Thesis) (15 Credit hours =24-48 months=4-8 semester):

1. Documentation of the subject should not be delayed for > 1.5 years after registration.
2. Could start after registration and should be completed, defended and accepted after passing the 2nd part final examination, after passing of at least 24 months after documentation of the subject of the thesis and after publishing of at least one paper from the thesis in a specialized peer-reviewed journal.
3. Accepting the thesis is enough to pass this part.

9. Methods of student assessments:

Method of assessment	weight	The assessed ILOs
1-Research assignment		- 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-OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

Assessment schedule:

Part I:

- Biostatistics & Computer: Written Exam (2 hours) + Structured oral Exam
- Research Methodology: Written Exam (2 hours) + structured oral Exam
- The first optional course: Written Exam (3 hours) + structured oral Exam
- The second optional course: Written Exam (3 hours) + structured oral Exam

Part II:

- Medical Parasitology: Two Written Exams (3 hours for each) + structured oral Exam+ OSPE.

10. Evaluation of program:

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

Course Specifications for Applied biostatistics (with computer use) for MDdegree of medical parasitology

Sohag University **Faculty of Medicine**

1. Program on which the course is given: MD degree in medical parasitology
2. Major and Minor element of program: Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Parasitology.
5. Academic year: Doctoral Degree – First Part (new bylaws), Post-Graduate - Sohag University
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specifications for Applied biostatistics (with computer use) for MDdegree of medical Parasitology

Code: COM0516-300

Title	Lecture	Practical	Total	Credit hours
applied biostatistics	30	30	60	3

B. Professional Information

1. Overall Aims of Course

- To use precisely medical biostatistics and computer programs

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. Enumerate the 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. understand how to collect and verify data from different sources

b2. Interpret data to diagnose prevalent parasitic health problems in the community

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 parasitic problems

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.

3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
Recent advances in collection, analysis and interpretation of data	3	1	1
-Details of Tests of significance: Proportion test	3	2	2
Chi-square test	3	3	3
Student T test	3.5	3	3
Paired T test	3.5	3	3
-Correlation	4	3	3
-Regression	3.5	3	3
-ANOVA test	3.5	3	3
-Discrimination analysis	3.5	3	3
Factor analysis	3.5	3	3
- parametric and non parametric tests	3.5	3	3
Total	**60**	**30**	**30**
Credit	**3**	**2**	**1**

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 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 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 Attendance and absenteeism throughout the course

Assessment 4 Computer search assignment performance throughout the course

Weighting of Assessments

Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

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

6. List of References

6.1- Course Notes

Department notes, lectures and handouts

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, 5th 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:

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

Course Coordinator: Dr/Ahmed Fathy Hammed

Head of Department: Prof/Eman Abd El-Baset Mohammed

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

Course Specifications of Research Methodology in MD degree in Medical Parasitology

Sohag university **Faculty of Medicine**

1. Program on which the course is given: MD degree in Medical Parasitology
2. Minor element of program
3. Department offering the program: Medical Parasitology
4. Department offering the course: Community Medicine and public Health
5. Academic year / Level; 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A- Basic Information

Program title: Research Methodology.

Code: COM0516-300

Title	Lecture	Practical	Total	Credit
Research methods	**30**	**30**	**60**	**3**

B- Professional Information

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 Parasitology through providing:

1. Recent scientific knowledge essential for the mastery of practice of Parasitology 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)

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. Enumerate 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 field of Parasitology

b3. Innovate and create researches to find solutions to prevalent problems in the field of Parasitology

b4. Criticize researches related to the field of Parasitology

c) Professional and Practical Skills:

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

c1. Master the basic and modern professional skills in conducting researches in the field of Parasitology

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
Details of epidemiological studies (case control, cohort and cross sectional)	8	4	4
Clinical trials, Quasi experimental study	8	4	4
Bias and errors	8	4	4
Setting a hypothesis	6	3	3
Recent advances in screening	6	3	3
- Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	10	5	5
Setting an objective - Critical thinking	7	3	3
Formulation of papers	8	4	**4**
Total	**60**	**30**	**30**
Credit hours	**3**	**2**	**1**

4. Teaching and Learning Methods

4.1- Lectures.

4.2- Computer search assignments

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 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1Final written exam Week: 24
Assessment 2Final Structured 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 Structured Oral Exam	50	%
Total	100	%

Any formative only assessments Attendance and absenteeism throughout the course
Computer search assignment performance throughout the course

6. List of References

6.1- Course Notes

Lecture notes prepared by the staff members in the departement

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, 5th 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/Ahmed Fathy Hammed
Head of Department: Dr/Eman Abd El-Baset Mohammed
Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013

Course Specifications of Medical Microbiology and Immunology in MD. degree in Medical Parasitology

Sohag University **Faculty of Medicine**

1. Program(s) on which the course is given: MD. Medical Parasitology.
2. Major and Minor element of program: Minor
3. Department offering the program: Medical Parasitology.
4. Department offering the course: Medical Microbiology and Immunology.
5. Academic year / Level: Post graduates registered for MD degree of Medical Parasitology.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title:Course Specifications of Medical Microbiology and Immunology in MD. degree in Medical Parasitology

Code: MIC0516-300

Title	Lecture	Practical	Total	Credit hours
Microbiology and immunology	**60**	**-**	**60**	**4**

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 the 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 allover 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

Topics actually taught	Total No. of hours	lectures	practical
I. Bacteriology & Mycology:			
1. Prokaryotic cell structure Cell wall- Cell membrane- - Internal structures	1	1	
2.Bacterial Genetics Mutation (spontaneous & induced)- Repair of damaged DNA- DNA mediated transformation- Transduction and bacterial viruses- Plasmids and conjugation- Transposable elements- Genetic transfer of virulence factors- Barriers to gene transfer – Recombinant DNA biotechnology	2	2	
3. Identification and Classification of bacteria Principles of taxonomy- Phenotypic characteristics- Genotypic characteristics	1	1	
4. Host Microbe interactions Anatomical barrier and normal flora- Principles of infectious diseases- Establishing the cause of infection- Bacterial pathogenesis and establishment of infection-	2	2	
5. Antimicrobial medications History and development- Features (selective toxicity- spectrum of activity- tissue distribution, metabolism and excretion)- Mechanisms of action- Resistance to antimicrobials- Combined antimicrobial therapy- Prophylactic use- Adverse effects and complications	2	2	
6-Systemic bacteriology			
a. -Spore-Forming Gram-Positive Bacilli: Bacillus & Clostridium Species b. - Non-Spore-Forming Gram-Positive Bacilli: Corynebacterium, Propionibacterium	1 1	1 1	
c. The Staphylococci - The Streptococci	1	1	
d. Enteric Gram-Negative Rods (Enterobacteriaceae	1	1	
e. Pseudomonads, Acinetobacters, & Uncommon Gram-Negative Bacteria - Vibrios, Campylobacters, Helicobacter, & Associated Bacteria	2	2	
f. Haemophilus, Bordetella, Brucella, & Francisella - Yersinia & Pasteurella - The Neisseriae	1	1	
g. Infections Caused by Anaerobic Bacteria - Mycobacteria	1	1	

h. Spirochetes & Other Spiral Microorganisms - Mycoplasmas & Cell Wall-Defective Bacteria - Rickettsia & Ehrlichia - Chlamydiae	2	2	
7.Mycology : classifications- types of mycosis-anti fungal drugs	2	2	
II. Virology:			
General Virology			
1. General properties of viruses , Classification and nomenclature of viruses	1	1	
2. Principles of virus structure	1	1	
3. Virus Genome Replication	1	1	
4. Pathogenesis and Control of Viral Diseases	1	1	
5. Viral Genetics	1	1	
6. Host Defenses against Viral Infection and Viral Counter defenses	1	1	
7. Antiviral drugs	1	1	
8. Viral vaccines	1	1	
9. Laboratory Diagnosis of Viral Infections	1	1	
systemic Virology			
Parvoviruses – Adenoviruses- Herpesviruses	1	1	
-Poxviruses- Picornaviruses (Enterovirus & Rhinovirus Groups)	2	2	
-Hepatitis Viruses	2	2	
Reoviruses, Rotaviruses, & Caliciviruses - Arthropod-Borne & Rodent-Borne Viral Diseases	2	2	
Orthomyxoviruses (Influenza Viruses)- Paramyxoviruses & Rubella Virus	2	2	
-Coronaviruses - Rabies, Slow Virus Infections, & Prion Diseases - Human Cancer Viruses AIDS & Lentiviruses	2	2	
III. Immunology :	6		
1. Cells and Organs of the Immune System (Hematopoiesis, Cells of the Immune System, Organs of the Immune System (structure &function), lymphocyte Recirculation).	1	1	
2. Innate Immune Response (Mechanical and chemical barriers, Pattern recognition receptors, Phagocytosis, acute phase response, Leukocyte Migration and Inflammation).	1	1	
3. Antigens (Immunogenicity Versus Antigenicity, Factors That Influence Immunogenicity, Epitopes, Haptens, Pattern-Recognition Receptors, Heterophil antigens, Adjuvants).	1	1	
4. Antibodies: Structure and Function (Immunoglobulin Fine Structure, Antibody-Mediated Effector Functions, Antibody Classes and Biological Activities, Antigenic Determinants on Immunoglobulins, The B-Cell Receptor, The Immunoglobulin Superfamily, Monoclonal Antibodies).	1	1	

5. Major Histocompatibility Complex (General Organization and Inheritance of the MHC, MHC Molecules and Genes, Detailed Genomic Map of MHC Genes, Cellular	1	1	
6 Antigen Processing and Presentation (Antigen-Presenting Cells, Self-MHC Restriction of T Cells, Endogenous Antigens: The Cytosolic Pathway, Exogenous Antigens: The Endocytic Pathway, Presentation of Nonpeptide Antigens).	1	1	
7. T-Cell Maturation, Activation, and Differentiation (T-Cell Maturation and the Thymus, Thymic Selection of the T-Cell Repertoire, TH-Cell Activation, T-Cell Differentiation, Cell Death and T-Cell Populations, Peripheral γƨ T-Cells. Antigen-Presenting Cells).	1	1	
8. B-Cell Generation, Activation, and Differentiation (B-Cell Maturation, B-Cell Activation and Proliferation, Regulation of the Immune Effector Response).	1	1	
8. The Complement System (The Functions of Complement, The Complement Components, Complement Activation, Regulation of the Complement System, Biological Consequences of Complement Activation, Complement Deficiencies).	1	1	
10. Cytokines (Properties of Cytokines, Cytokine Receptors, Cytokine Antagonists, Cytokine Secretion by TH1 and TH2 Subsets, Cytokine-Related Diseases, Therapeutic Uses of Cytokines and Their Receptors, Cytokines in Hematopoiesis).	1	1	
11. Cell-Mediated Effector Responses (Effector Responses, General Properties of Effector T Cells, Cytotoxic T Cells, Natural Killer Cells, Antibody-Dependent Cell-Mediated Cytotoxicity).	1	1	
12-Hypersensitivity	1	1	
13-Autoimmune diseases	1	1	
14-immunodeficiency	1	1	
IV. Infection Control:(nosocomiology)	2	2	
1. Definitions of health care associated infections (HAIs) 2. Risk factors for nosocomial infection transmission 3. Epidemiological aspects of HAIs 5. Antimicrobial stewardship: Rational use of antimicrobials Clinical use of antibiotics for therapy and prophylaxis. 6-Antibiotic resistance: reservoirs and how to prevent. Antibiotic resistance 7- Occupational health and safety			
v.practical			
1. Biosafety in microbiological laboratories	1	1	
2. Approaches to diagnostic microbiology • Specimen collection	1	1	

• Culture containers and media			
• Culture of bacteria			
• Identification tests			
• Immunological and serological methods			
• Nucleic acid based techniques			
3.Antimicrobial susceptibility tests, lab control of antimicrobial therapy	1	1	
Total	**60**	**60**	-
Credit	**4**	**4**	

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 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 2 …Finalwritten exam… Week: 24
Assessment 3… Structured Oral Exam …. Week: 24
Assessment 4… OSPE…. Week: 24

Weighting of Assessments

Final-term written examination 50 %
Structured Oral Exam. 30 %
OSPE 20 %

Total 100 %

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. Mamdoh Mohamed Esmat

Head of Department: Dr. Abeer Shenief

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

Course Specifications of Clinical and Chemical Pathology For MD. of Parasitology

Sohag University **Faculty of Medicine**

1. Program(s) on which the course is given: Doctorate degree in Medical Parasitology
2. Major and Minor element of program: Minor
3. Department offering the program : Department of Medical Parasitology
4. Department offering the course: Clinical and Chemical Pathology
5. Academic year / 1st part of Doctorate degree of Medical Parasitology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specifications of Clinical and Chemical Pathology For MD. of Parasitology

Code:CL.P0516-300

Title	Lecture	Practical	Total	Credit hours
Clinical and Chemical Pathology	60	-	60	4

B. 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	Total	lectures	Practical
1. 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	8	8	
2. Normal haemostasis. Disorders of coagulation and thrombosis:. -Hemophilias -Thrombophilias -How to investigate a case of bleeding.	7	7	
Anticoagulants	2	2	
3. Clinical Chemistry: - Carbohydrates.	6	6	
- Body fluids - Plasma proteins and liver disorders.	6	6	
- Kidney function	6	6	
4. Clinical microbiology: - Methods of collecting samples and criteria of rejection. - Staining and culture media.	6	6	
- Parasites in urine and stools	6	6	
- Medically important cases: - a- fever b- diarrhea. c- UTLs. d- Meningitis.	6	6	

5. Clinical immunology: - Types of antigen and antibody reactions.	2	2	
- Diagnosis of infectious diseases	1	1	
- Immunological aspects of parasitic diseases	4	4	
Total	**60**	**60**	
Credit	**4**	**4**	

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-OSPE	-Practical skills, intellectual skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1 Final written Examination 24w exam

Assessment 2 oral……. 24w exam

Assessment 3 practical …… 24w exam

Weighting of Assements

Final written Examination 50 %

Structured oral Examination. 30 %

OSPE Examination 20 %

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**
    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/Lila Muhammed**.**

Head of Department : Prof. Hasnaa Abo Elwafa

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

Course Specifications of Medical Biochemistry in Doctorate degree in Medical Parasitology

Sohag University **Faculty of Medicine**

1. Program(s) on which the course is given: MD. in Medical parasitology
2. Optional element of program
3. Department offering the programme :Medical parasitology Department
4. Department offering the course Medical Biochemistry Department
5. Academic year / Level: Post graduate, MD degree in Medical parasitology (first part)
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A- Basic Information

Title: Course Specifications of Medical Biochemistry in MD. degree in Medical Parasitology

Code:BIO0516300

Title	lecture	practical	total
Medical Biochemistry	**60**	**-**	**60**

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 diagn**osis.**

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	Lectures	Practical
(1)Biological oxidations include: -General consideration. -Electron transport. -ATP-synthesis. -Translocations. -Superoxide dismutase.	3	3	
(2) Glycolysis and citric acid cycle: - General consideration. -Enzyme structure and reaction mechanisms. -Regulation mechanisms and biomedical importance.	4	4	
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.	8	8	
(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.	5	5	
(5)Protein metabolism: -General consideration -Amino acids degradation: General reaction, nitrogen disposal and ammonia disposal. -Nitrogen fixation.	5	5	

-One carbon metabolism. -Individual amino acids metabolism.			
6) Integration of metabolism: - Mechanisms and regulation	3	3	
7) Metabolism of nucleotides: -General considerations -Purin and pyrimidine biosynthesis. -Ribonucleotide reductase –thioredoxin and Glutaredoxin, Thymidylate synthase and dihydrofolate reductase -Uric acid -Genetic diseases.	4	4	
8) Porphyrin metabolism and heam biosynthesis and catabolism (9) Mineral metabolism Tissue chemistry	2 2	2 2	
A- Eukaryotic chromosomes Gene E xpression : -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	5	5	
12)-Tumour markers. 13)Metabolism of xenobiotics. (14)Body fluid : -Blood, urine,-semen, C.S.F, bile, gastric juice, milk. (15)Minerals: (calcium.phosphate,Na,k,mg,Cu,iron,zinc,iodine ,mercury,Cd,florid,lead ,and others trace elements . (16)Immnoglobulines (17)Physical shemistry (18)Free radicals (19)Enzymes: -kinetics -Mechanism of action Regulation - (20)Vitamin: -Water soluble vitamin. Fat soluble vitamin -Immunoglobulin -Steatorhea -Fate of ammonia	2 2 2 2 2 2 2 2 5	2 2 2 2 2 2 2 2 5	
Total	**60**	**60**	**-**
Credit	**4**	**4**	

4. Teaching and Learning Methods

4.1- Lectures

4.2- Searches in computers (assignments)

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 Exa	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

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
3. 6.4- Periodicals, Web Sites, … etc
1. http://www.ncbi.nlm.gov/
2. http://www.vlib.org/
3. www.genome.ad.jp/kegg/regulation.
4. Findarticle.com
5. 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. Reda Salah Yusef

Head of Department: Dr.Nagwa Sayed Ahmed Hassan

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

Course Specifications of Medical Genetics in MD. Degree Of Medical Parasitology

Sohag University **Faculty of Medicine**

1. Programme(s) on which the course is given. : MD. Of Medical Parasitology.
2. Optional element of the 1st part of the program.
3. Department offering the course: Medical Parasitology
4. Department in charge: Histology and Cell Biology.
5. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specifications of Medical Genetics in MD. Degree Of Medical Parasitology

Code:HIS0516-300

Title	lecture	practical	total
Basics of Medical Genetics	60	-	60

B. Professional Information

1. Overall Aims of Course

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

Have the basic knowledge about genes morphology, structure and function, concepts of genetics and inheritance, genetic disorders and classification of genetic diseases and to prepare him/her for further studies later in the course of Modern Genetics.

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and understanding:

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

a1. List and identify the stages of mitosis and meiosis, as well as the cell cycle, and explain the significance of each

a2. Enumerate the chemical nature of genetic material (DNA & RNA)

a3. Enumerate how the DNA is organized to serve as genetic materials (gene and genome)

a4. Enumerate the normal chromosome (structure & number).

a5. Enumerate how the genetic information transferred to RNA during the process of transcription.

a6. Identify the genetic code

a7. Enumerate the translation of genetic information on mRNA into polypeptide chains

a8. Describe gene mutation and DNA repair on the molecular levels.

a9. Identify chromosomal numerical and structural aberrations.

a10. Enumerate the basic concepts of Mendelian and non Mendelian inheritance.

a11. Identify the various types of chromosomal disorders and biochemical genetics.

a12. Enumerate the new concepts of DNA technology.

a13. Describe the knowledge of the use of this technology in the advances disease diagnosis.

b) Intellectual Skills

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

b1. Integrate and evaluate genetic information and data from a variety of sources in order to gain a coherent understanding of theory and practice.

b2. Find and evaluate new solutions to many kinds of Genetic problems.

c) Professional and Practical Training aspects:

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

c1. Assess methods and tools existing in the area of Parasitology.

d) General and Transferable Skills:

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

d1. Self-confidence.

d2. Think scientifically.

d3. Create the tendency to apply the knowledge in the clinical fields**.**

3. Course Contents:

Topic	Total No. of hours (60h)	Lecture (60h)	Practical
A.Course coordinator			
Introduction (from gene to genome)	2	2	
Patterns of inheritance Mendelian, non Mendelian, multifactorial	3	3	
Update in medical genetics	3	3	
B. Biochemistry department			
Chemistry of nitrogenous bases	2	2	
DNA replication	2	2	
RNA synthesis	2	2	
Genetic code	2	2	
Protein synthesis	2	2	
Regulation of gene expression	2	2	
DNA alteration	2	2	
Molecular biology and parasitology	4	4	
C.Histology department			
Nuclear contents	2	2	
Cell divisions (miosis and mitosis)	2	2	
Chromosome structure and function	2	2	
D. Pathology department			

Mutations	2	2	
Mendalian disorders	3	3	
Transmission pattern of single gene disorders	2	2	
Disorders associated with defects in structural proteins	2	2	
Disorders associated with defects in receptor protein	2	2	
Disorders associated with enzyme defects	2	2	
Disorders associated with defects in proteins that regulate cell growth	2	2	
Disorders of multi-factorial inheretence	2	2	
Cytogentic disorders	2	2	
Single gene disorder with non classic inheritance	2	2	
Genetics and cancer	2	2	
E. Microbiology department			
Immunogenetics	3	3	
Genetic engineering	2	2	
Total	**60**	**60**	
Credit	**4**	**4**	

4. Teaching and Learning Methods

4.1-Lecture (data show, video-clip)

4.2-class discussion

4.3-student's group-project

4.4-CDs/ slide projector

4.4- field oriented labs collect samples for lab.work (practical) (whenever the lab is available).

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 written MCQs1st semester exam	10 Week
Assessment 2 discussion with low achievable students	11 week .
Assessment 3 written MCQs final exam	32 Week
Assessment 4 oral final exam	32 Week

Weighing of Assessments:

1st Term Examination MCQ or cases-	20%
2nd Term Examination MCQ or cases-	10%
Final-term Examination	50%
Oral Examination.	10%
Semester Work	10%
Total	100%

6. List of References

6.1- Course Notes

Lecture notes and high quality CDs

6.2- Essential Books (Text Books)

1. Genetics: from Genes to Genomes, Hartwell L, Hood L, Goldberg ML et al. (2000) Boston: McGraw Hill

2. Molecular biology of the gene, Waston J.D.2004.. Pearson education, Inc., publishing as Benjamin Cummings, 1301 Sansome street, San Francisco, CA 94111

6.3- Recommended Books

1) Discovering Genomics, Proteomics and Bioinformatics 2nd edition - by A. Malcolm Campbell and Laurie J. Heyer. (ISBN 0-8053-4722-4; published by Cold Spring Harbor Laboratory Press and Benjamin Cummings: 28 February, 2006)

2)Essentials of Medical Genetics 13th edition-by AlanE.H.Emery. Churchill Livingstone,2007.

6.4- Periodicals, Web Sites

BMC Genetics

Current genetics

Genetics

Genetica

Journal of Genetics

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 Hekmat Osman Abdel Aziz

Head of Department: Dr Doha Saber

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

Course Specifications of Community Medicine and public Health

For MD degree of Parasitology

Sohag university **Faculty of Medicine**

1. Program on which the course is given: MD 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. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title : Course Specifications of Community Medicine and public Health For MD degree of Parasitology

Code:COM0516-300

Title	Lecture	Practical	Total	Credit hours
public health and community medicine	**60**	**-**	**60**	**4**

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:

2. Scientific knowledge essential for practice of Parasitology according to the international standards.
3. Active participation in community needs assessment and problems solving.
4. 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	No. of hours	Lecture	practical
Prevention and Control aspects of the ds	2	2	
Levels of Prevention in the community	2	2	
Chain events of Infectious cycle	2	2	
Epidemiology of selected communicable diseases: Viral ds: Hepatitis	2	2	
Polio	2	2	
Diarrheal ds	2	2	
Malaria, Filaria, Yellow fever	2	2	
Dengue, Rift Valley,	2	2	
Viral heamorrahgic fevers.. Ebola, Lassa, Merburg…….etc	2	2	
AIDs	2	2	
Rabies	2	2	
Others	2	2	
Bacterial ds: - Tetanus	2	2	
Typhoid & Paratyphoid	2	2	

Food Poisoning	2	2	
Tuberculosis	2	2	
Brucellosis	2	2	
Others: Shistosomiasis	2	2	
Other Parasitic infestation	2	2	
Locally endemicds	2	2	
Diseases of Public Health Importance	2	2	
Epidemiology and risk factors of non-communicable diseases	2	2	
Cancer	2	2	
Emerging and Remerging diseases	2	2	
SARS	2	2	
Avian flue	2	2	
Global Environmental & Climate determinants of diseases	2	2	
International classification of diseases	2	2	
Community diagnosis, ds. Surveillance & Surveys	2	2	
Investigation of an epidemic, the attack rates	2	2	
Total	**60**	**60**	
Credit	**4**	**4**	

4. Teaching and Learning Methods

4.1- Lectures
4.2-Practical
4.3-Computer search assignments
4.4-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 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 2…Final written exam….. week: 24
Assessment 3… Final Structured Oral Exam …..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 %
Structured Oral Exam	50 %
Total	100 %

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

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, 5th 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/Ahmed Fathy Hammed

Head of Department: Dr/Eman Abd El-Baset Mohammed

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

Course Specifications of Tropical Medicine For MD Degree of Parasitology

Sohag University **Faculty of Medicine**

1. Program(s) on which the course is given: MD degree in Parasitology
2. Major and Minor element of program: Minor
3. Department offering the program : Department of Medical Parasitology
4. Department offering the course: Tropical Medicine& Gastroenterology
5. Academic year / 1st part of MD degree of Medical Parasitology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specifications of Tropical Medicine For MD Degree of Medical Parasitology
Code: TRO516-300

Title	lecture	clinical	total	Credit hours
Tropical Medicine and gastroenterology	60	-	60	4

B. Professional Information:

1. Overall Aims of Course:

By the end of this coarse, the student should be able to have basic knowledge about fevers and its common causes. Also, the eatiology, pathogenesis, clinical picture, complications and management of the most common infectious diseases. And to understand the most common gastrointestinal and hepatic diseases especially those prevalent in our country and be able to diagnose and manage them in an efficient degree to help him/her as a future medical parasitologist.

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

topic	Total No of hours	lectures	practical
1. Diagnosis of a case of fever	4	4	
a. Pyrexia of unknown origin	2	2	
b. Nosocomial infections	2	2	
2. Helminthic Diseases	22	22	
a. Schistosomiasis	2	2	
b. Paragonimus westermani	1	1	
c. Fascioliasis	1	1	
d. Clonorchis sinensis	1	1	
e. Heterophyes heterophyes	1	1	
f. Taeniasis	1	1	
g. Hymenolepis nana, diminuta	1	1	
h. Diphylobothrium latum	1	1	
i. Hydatid disease	1	1	
j. Ancylostomiasis	1	1	
k. Ascariasis	1	1	
l. Enterobiasis	1	1	
m. Strongyloidiasis	1	1	
n. Cappilariasis	1	1	
o. Tissue larva migrans	1	1	
p. Trichinosis	1	1	
q. Filariasis	1	1	
r. Loaisis	1	1	

s. Onchocerciasis	1	1	
t. Dracanculus medinensis	1	1	
u. Treatment of helminthic infections	1	1	
3. Protozoal Diseases	14	14	
a. Malaria	2	2	
b. Babesiosis	1	1	
c. Amaebiasis	1	1	
d. Giardiasis	1	1	
e. Balantidiasis	1	1	
f. African Trypanosomiasis	1	1	
g. American Trypanosomiasis	1	1	
h. Toxoplasmosis	2	2	
i. Leshmaniasis	2	2	
j. Arthropod borne infections	2	2	
4. Infectious and non-infectious diarrhea	22	22	
a. Salmonella infections	1	1	
b. Brucellosis	1	1	
c. Shigellosis	1	1	
d. Tuberculosis of the GIT	2	2	
e. Cholera	1	1	
5. Cholestasis	1	1	
6. Zoonoses	1	1	
7. Tropical Liver Diseases	1	1	
8. Cardiovascular Diseases in the Tropics	1	1	
9. Neurological Manifestations of Tropical Diseases	1	1	
10. Haematological Disorders in the Tropics	2	2	
11. Emergencies in Fevers	1	1	
12. Infections in the immunocompromized host	3	3	
a. Infection and immunity interaction	1	1	
b. Malnutrition and infection inter-relations	1	1	
c. Immunizations	1	1	
13. Precautions taken by travelers to tropical areas.	1	1	
Total	**60**	**60**	**-**
Credit	**4**	**4**	

4. Teaching and Learning Methods

4.1 - Lectures

4.2-…clinical 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…….
http://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/ Mahmoud Saif Al-Islam Abd Elfatah**.**

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

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

Course Specifications of Histology and Cell Biology For MD. degree of Medical Parasitilioy

Sohag University **Faculty of Medicine**

1. Program on which the course is given: MD of Medical Parasitology (1st part)
2. Optional element of program.
3. Department offering the program Medical Parasitology
4. Department offering the course: Histology and Cell Biology
5. Academic year / Level graduates MD of Medical Parasitology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course specification oF Histology and Cell Biology For MD. degree of Medical
Code: HIS0516-300

Title	Lecture	Practical	Total
Histology	**60**	**-**	**60**

B. Professional Information

1. Overall Aims of Course

Our aim is to graduate competent parasitologist mastering the:
Scientific know ledges essential for introducing histology practices in research work of Parasitology.

2. Intended learning outcomes (ILOs):

a) Knowledge and Understanding:

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

a1. Enumerate sufficient knowledge of the histological structure of the different body tissues and organs.
a2. List the different methods for tissue examination.
a3. Enumerate general histological stains.

b) Intellectual Skills:

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

b1. Identify the different histological slides.
b2. Analyze the contents of any histological slide.
b3. Identify the histological structure of the body organs.
b4. Interpret some of the medical importance of the histological structure.

a) Professional and Practical Skills:

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

c1. Master the basic and modern professional skills in Histology and Electron Microscopy

c) General and Transferable Skills:

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

d1. Use the computer to enter histological web sites.
d2. Collect scientific data from the computer.

3. Contents

Topic	Total hours	Lecture hours	Practical
Microscopy -types of microscope -light microscope and the resolving power -electron microscope;types,resolving power and terms used	2	1	
Micro technique -preparation of paraffin blocks -filming -smearing -Grinding -Spreading -E.M. preparations	2	1	
Histological stains -HX&E -Stains for collagen fibers -Stains for elastic fibers -Stains for reticular fibers	2	1	
Cytology -nucleus -cytoplasmic organelles and inclusions.	2	1	
Basic tissues of the body -epithelial tissue. -connective tissue proper,cartilage,bone. -muscular tissue. -nervous tissue.	6	1	
Cardiovascular system General structure of the heart wall. General structure of the wall of blood vessels. Arteries (large+medium sized) Viens (large+medium sized) Structure of special types of ateries and veins. Arteriovenus connection;capillaries,sinusoids and arteriovenous anastomosis.	5	1	
Lymphatic system Structure of lymph vessels. Structur and function of lymphatic orgasns: Lymph nodes. Spleen thymus Tonsils	5	1	
Integumentary system Structure and function of the skin.	4	1	

Digestive system Oral cavity: Lip Tongue. Salivary glands: Digestive tract: General structure og GIT. Oesophagus. Stomach;fundus,cardiac and pyloerus. Small intestine;duodenum,jejunum and ileum. Large intestine and appendix. Cell renewal in GIT. Junctions;gastro-oesophageal,pylorodudenal and rectoanal. Pancreas. Liver. Structure and function of gall bladder.	8	1	
Respiratory system -Structure and function of conducting portion of the respiratory system: Nasal cavity. Trachea and tracheobronchial epithelium. Bronchial tree. Bronchioles. -structure and function of the respiratory portion: Respiratory bronchioles. Alveolar ducts and alveolar sacs. Alveoli and alveolar epithelium;types and function of cells.	6	1	
Endocrine system Main components of endocrine system. Pituitary gland. Thyroid gland. Parathyroid gland. Suprarenal gland Pineal gland:	5	1	
Urinary system Kidney Urinary passeges Ureter. Urinary bladder Male and female urethra.	5	1	
Male reproductive system Testis: Male genital ducts;structure and function:	4	1	

Female reproductive system Ovary;structure and function: Uterine(fallopian tubes) structure and function. Uterus;structure and function:.	4	1	
Total	**60**	**60**	
Credit	**4**	**4**	

4. Teaching and Learning Methods

4.1- lectures.
4.2- practical lessons.
4.3- continuous supervision

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 of the candidate is at the end of the course(1st part exam)
Assessment 1 Final written exam (1 paper) week 24
Assessment 2 Final Structured Oral Exam week 24
Assessment 3 Final OSPE week 24

Weighting of Assessments

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

6. List of References

6.1- Course Notes

-Lectures notes prepared in the form of a book authorized by the department
-Laboratory manual authorized by the department

6.2- Essential Books (Text Books)

-Junqueira, Carneino and Kelly (1995): Basic Histology, 7th ed.Librairrie du liban and lang buruit,London,New York.
-Fawcett(1994):A Text Book of Histology,12th ed.Chapman and Hall,New York,London.
- Drury,R.A.B. and Walington,E.A.(1980): Histological techniques,5th ed.Oxford university press,New York.
-Pears,A.G.E.(1985): Histochemistery theoretical and applied,4th ed.Churchill Livingstone,Melbourne and New York.

6.3- Recommended Books

- Cormack,H.D.(1987): A text book of Histology,9th edition,Lippincott,J.B. Company,Philadelphia.
- Williams,P.L.(1995):Gray's Anatomy,the anatomical bases of Medicine and Surgery,38th ed.,Cgurchill,Livingstone,Britain.

6.4- Web Sites:

http://www.histology-world.com
http://histo.life.illinois.edu/histo/atlas/slides.php

6.5-Periodicals:

-Egyptian J of Histology
-Egyptian J of Anatomy
- Acta Anatomica
- International J of Experimental Research
- Science
- Cell and Tissue Research

7. Facilities Required for Teaching and Learning

-An appropriate teaching microscope with a screen.
-Discussion Microscope.
-Good equibments essential for preparation of histological slides in the preparation room.
- Staining set.
-Data show

Course Coordinator: Dr Hekmat Osman

Head of Department: Dr Doha Saber

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

Course Specifications of Pathology for MD. Of Medical Parasitology

Sohag University **Faculty of Medicine**

1. Program on which the course is given : MD. Of Medical Parasitology
2. Optional element of program
3. Department offering the program: Medical Parasitology
4. Department offering the course: Pathology
5. Academic year / Level: Post graduates registered for MD program
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specifications of Pathology for MD. Of Medical Parasitology
Code: PAT0516-300

Title	Lecture	Practical	Total
Pathology	**60**	**-**	**60**

B. Professional Information

1. Overall Aims of Course:

By the end of this course the student should be able to Gain the professional knowledge and understanding of general pathology, special pathology and genetics as related to the main field of medical Parasitology. And can accurately and independently interpret the gross and microscopic pathology specimens.

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and Understanding:

By the end of the program, the student is expected to gain the knowledge and understanding of:

a1. The deviation or change in the normal structure and function of the body on the macro- and micro levels; general pathology:
a2. Cellular injury reversible and irreversible, causes, effects e.g. degeneration, necrosis and apoptosis (programmed cell death).
a3. Inflammation; causes, classification, fate, complications, healing and repair.
a4. Infectious diseases; viral, bacterial, fungal and parasitic and tissue response to these invaders.
a5. Immunity, factors affecting immune response, disorders of the immune system
a6. Nutritional deficiencies and their effects on the body system
a7. Cellular growth disturbances e.g. atrophy, hypertrophy, hyperplasia, metaplasia, and dysplasia.
a8. Study of pathology of different body organs and systems:
-Cardiovascular pathology
-Respiratory pathology
-Diseases of the kidney and lower urinary tract
-Diseases of the gastrointestinal tract, hepatobiliary system and pancreas
-Pathology of the male and female genital systems including the breast
-Hematopathology and pathology of the lymphoid system
-Skeletal, soft tissue and joint pathology
-Endocrine pathology
-Neuropathology
-Dermatopathology

-An introduction to immunohistopathology.
-An introduction to medical genetics.

b) Intellectual Skills

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

b1. Interpret the data through reading the reports reaching to the pathology laboratory along with the biopsies and excised specimens, including history, clinical examination, radiological and laboratory investigations other than the histopathology.

c) Professional and Practical Skills

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

c1. Recognize the gross pathology specimens kept in the jars and pictures taken for unavailable gross pathology in the museum, put a diagnosis or differential diagnosis..

c2. Describe the gross picture of the specimens and deviation of normal regarding the size, site, shape, color localized abnormality

c3. Recognize how to deal with the specimens, fixation, trimming, processing, tissue sectioning, hematoxylin and eosin staining

c4. Preparing and examining the slides by the bright field microscope and putting a diagnosis or differential diagnosis

c5. Using the microscope monitor system in discussing the slides in groups to reach a result

d) General and Transferable Skills

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

d1. Use standard computer program effectively (windows and office)

d2. Utilize computers in conduction with other pathology departments via teleconferences

d3. Using the computers in searching about resent data in the libraries via the internet

3. Contents

Topic	No. of hours	Lecture	Practical/ Museum
1-General pathology:			
1.1. Introduction	1	1	
1.2. Inflammation, Repair, Cell injury and cell death	3	3	
1.3. Circulatory disturbances	3	3	
1.4. Infectious diseases	3	3	
1.5. Immunopathology	5	5	
Total	15	15	
2- Systematic pathology:			
2.1. Cardiovascular diseases	3	3	
2.2. Respiratory diseases	2	2	
2.3. Gastrointestinal diseases	3	3	
2.4. Diseases of hepatobiliary system	2	2	
2.5. Diseases of exocrine pancreas and peritoneum	2	2	
2.6. Diseases of the urinary system and male and female genital systems	2	2	

2.7. Diseases of the musculoskeletal system and nervous system	2	2	
2.8. Blood diseases, the lymph node and spleen	7	7	
2.9. Immunohistopathology	2	2	
2.10. Medical genetics	4	4	
2.11. Specimen preparation and examination	16	16	
Total	60	60	
Credit	4	4	

4. Teaching and Learning Methods

4.1- Lectures
4.2- Practical sessions
4.3- Discussions.

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 1Two written exams at mid-term and at final term.
Assessment 2 OSPE at final term.
Assessment 3 Structured Oral Exam at final term.
Assessment 4 Attendance and absenteeism at the whole year.

Weighting of Assessments

Mid-Term Examination	10%
Final-term Examination	50%
Structured Oral Exam.	20%
OSPE	20%
Total	100%

6. List of References

6.1- Course Notes

Principals of general pathology, Gamal Nada.
Principals of special pathology, Gamal Nada.
Department practical & Museum notes.

6.2- Essential Books

Principals of general pathology, Gamal Nada.

Principals of special pathology, Gamal Nada.

6.3- Recommended Books

Pathologic Basis of Disease, Kumar, Cotran, Robbins.

6.4- Periodicals, Web Sites:

http://www.humpath.com/Websites-Pathology
http://peir2.path.uab.edu/reslinks/____Pathology_Education_Websites/index.html
http://library.med.utah.edu/WebPath/webpath.html

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. Fatma El Zahraa Salah El Deen

Head of Department: Dr. Eman Muhammade Salah El Deen

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

Course Specifications For Medical Parasitology for Doctorate Degree in Medical Parasitology

Sohag University **Faculty of Medicine**

1. Program on which the course is given: MD. Medical Parasitology
2. Major element of program.
3. Department offering the programme: Medical Parasitology
4. Department offering the course: Medical Parasitology
5. Academic year / Level: registered MD. Medical Parasitology (2nd part) students.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Medical Parasitology

Code: PAR0516300

B. Professional Information

1. Overall Aims of Course

By the end of the course the student should be able to have the perfect-creative knowledge of the parasites affecting human beings all over the world and, so to be able to efficiently diagnose and teach medical Parasitology to undergraduates and ready to develop her/his level by self learning to add knowledge in the specialty.

2. Intended Learning Outcomes of Course (ILOs):

The student is to be armed with perfect-creative knowledge about the human parasites allover 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 geographical distribution and life cycle of each, inside and outside the body.
a3. Differentiate between parasites on morphological bases**.**
a4. Have 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. Enumerate 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. Enumerate 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.

b4. Criticize in a scientific pattern at least 15 published papers in the different branches of Medical Parasitology (parasite distribution and public health or statistics, lab. Animals and pathology of parasites or drugs, parasites and immunology, snails….etc.

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 different 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. Collect scientific data from the computer.

d3. Work in groups, as a leader or as a college.

d4. Collect data from medical canters and patients.

d5. Compile a review article about a specific subject. (90 hs.)

d6. Participate in related scientific meetings.

3. Contents: 570h lectures +450h practical

Topic	No of Hours	Lecture	Tutorial/ Practical
Introduction	7	7	-
Helminthes Introduction	7	7	- -
Trematoda introduction.	7	7	
Genus: Fasciola	17	5	12
Genus Dicrocoelium Dicrocoelium dendriticum Dicrocoelium hospes	9	5	4
Genus: Echinostoma Echinostoma ilocanum (= Euparyphium ilocanum) Echinostoma malayanum Echinostoma revoltum	5	5	-
Genus Schistosoma	27	7	20

Schistosoma haematobium **complex** Schistosoma haematobium Schistosoma bovis Schistsoma mattheei Schistosoma intercalatum Schistosoma spindale Schistosoma incognitum Schistosoma mansoni **complex** Schistosoma mansoni Schistosoma rodhaini Schistosoma japonicum **complex** Schistosoma japonicum Schistosoma mekongi Schistosoma margrebowiei			
Genus: Opisthorchis Opisthorchis felineus Opisthorchis viverrini	5	5	-
Genus: Clonorchis Clonorchis sinensis **Genus:** Heterophyes Heterophyes heterophyes	11	5	6
Genus: Metagonimus Metagonimus yokogawai	5	5	-
Genus: Paragonimus Paragonimus westermani Paragonimus compactus Paragonimus kellicotti (= P. miyazaki) Paragonimus ohirai Paragonimus philippinensis	5	5	-
Genus: Fasciolopsis Fasciolopsis buski	5	5	
Cestoda	7	7	
Genus: Diphyllobothrium Diphyllobothrium latum **Genus:** Spirometra Spirometra mansonoides Spirometra proliferum	19	7	12
Genus: Taenia Taenia saginata Taenia solium Taenia taeniaeformis Taenia crassiceps Taenia glomeratus Taenia serialis	19	7	12
Genus: Multiceps Multiceps multiceps Multiceps brauni	5	5	

Genus: Echinococcus Echinococcus granulosus Echinococcus multilocularis Echinococcus vogeli Echinococcus oligoarthus	27	11	16
Genus: Dipylidium Dipylidium caninum **Genus:** Hymenolepis Hymenolepis nana Hymenolepis diminuta	11	7	4
Nematoda	7	7	
Genus: Trichocephalus Trichocephalus trichura **Genus**: Capillaria Capillaria hepatica . Capillaria philippinensis.	11	7	4
Genus: Trichinella Trichinella spiralis	9	5	4
Genus: Dioctophyma Dioctophyma renale.	9	5	4
Genus: Strongyloides Strongyloides stercoralis	9	5	4
Genus: Ancylostoma Ancylostoma duodenale Ancylostoma braziliense Ancylostoma caninum Ancylostoma ceylanicum **Genus**: Nectaor Necator americanus **Genus:** Trichstrongylus Trichostrotigylus colubriformis Trichostrotigylus orientalis **Genus:** Angiostrongylus Angiostrongylus cantonensis	11	7	4
Genus: Ascaris Ascaris lumbricoides Ascaris suum **Genus**: Toxocara Toxocara canis Toxocara cati	11	7	4
Genus: Enterobius Enterobius vermicularis Enterobius gregori	11	7	4
Genus: Dracunculus Dracunculus medinensis	9	5	4
Genus: Gnathostoma Gnathostoma spinigerum **Genus:** Anisakis Anisakis simplex	9	5	4

Genus: Physaloptera Physaloptera cucasica			
Genus: Thelazia Thelazia callipaeda Thelazia coliforiensis **Genus**: Wucheraria Wuchereria bancrofti Wuchereria var pacifica	9	5	4
Genus: Brugia Brugia malayi **Genus:** Loa Loa loa **Genus**: Mansonella Mansonella ozzardi Mansonella perstans Mansonella streptocerca Mansonella bolivarensis **Genus**: Dirofilaria Dirofilaria repens Dirofilaria immitis.	5	5	
Genus: Onchocerca Onchocerca volvulus	5	5	
MEDICAL MALACOLOGY			
Genus: Vivipara Vivipara unicolour **Genus:** Lanistes Lanistes bolteni **Genus:** Melanoides **(**= Melania**)** Melanoides tuberculata **Genus:** Cleopatra Cleopatra bulimoides Cleopatra cyclostomoides **Genus:** Valvatia Valvatia nilotica **Genus:** Pirenella Pirenella conica	11	7	4
Genus: Oncomelania Oncomelania **spp.** **Genus:** Lymnaea Lymnaea cailliaudi Lymnaea truncatula **Genus:** Physa Physa acuta **Genus:** Segmentina Segmentina **spp.** **Genus:** Bulinus Bulinus (Bulinus) **spp.** **Genus:** Biomphalaria Biomphalaria alexandrina **group**	11	7	4

Infecting and examining snails	39	7	32
Slide preparation	73	13	60
Helminthes total	447	221	226
Introduction of Arthropoda	5	5	-
Dieptera	5	5	
Genus: Anopheles Anopheles gambiae Anophles sergenti Anopheles spp **Subfamily: Culicinae** **Genus:** Culex Culex pipiens **Genus:** Aedes Aedes aegypti	17	7	10
Genus: Phlebotumus Phlebotomus papatasi	9	5	4
Genus: Simulium Simulium damnosum Simulium neavi **Genus:** Culicoides Culicoides spp. **Genus:** Tabanus (Horse-flies) Tabanus spp. **Genus:** Chrysops (Deer-flies) Chrysops silaceus Chrysops dimidaitus	11	7	4
Genus: Erystalis Erystalis tenax **Genus:** Piophila Piophila casie **Genus**: Hypoderma (Gad flies) Hypoderma bovis	7	7	-
Genus: Glossina Glossina morsitan Glossina palpalis	9	5	4
Genus: Musca Musca domestica Musca sorbens **Genus**: Stomoxys Stomoxys calcitrans **Family: Fanniidae** **Genus**: Fannia Fannia canicularis Fannia scalaris **Genus:** Oestrus Oestrus ovis	11	7	4
Genus: Calliphora Calliphora vomitoria Calliphora vicina	13	9	4

Genus: Lucilia Lucilia cuprina **Genus**: Phaenicia Phaenicia sericata **Genus:** Phormia Phormia regina **Genus: Chrysomyia** Chrysomyia megacephala Chrysomyia bezziana **Genus:** Cochliomyia Cochliomyia hominivorax Cochlomyia macellaria **Genus**: Cordylobia Cordylobia anthropophaga Cordylobia rodhaini **Family:** Sarcophagidae **Genus:** Sarcophaga Sarcophaga hemorrhoidalis **Genus**: Wohlfartia Wohlfartia magnifica Wholfartia vigil vigil **Genus**: Hypoderma Hypoderma bovis **Genus**: Gastrophilus Gastrophilus intestinalis Gastrophilus nasalis **Genus**: Dermatobia Dermatobia hominis			
Siphonaptera **Genus**: Pulex Pulex irritans **Genus:** Ctenocephaledes Ctenocephaledes canis Ctenocephaledes felis **Genus:** Xenopsylla Xenopsylla cheopis **Genus**: Tunga Tunga penetrans **Genus:** Echidnophaga Echidnophaga gallinacea **Genus**: Nosopsyllus Nosopsyllus fasciatus **Genus**: Leptopsylla Leptopsylla segnis	13	5	8
SUBORDER: ANOPLURA **Genus:** Pediculus Pediculus humanus capitis Pediculus humanus corporis **Genus**: Pthirus Phthirus pubis	9	5	4

ORDER: HEMIPTERA **Genus:** Cimex Cimex lectularius Cimex hemipterus **Genus:** Leptocimex Leptocimex boueti **Genus:** Triatoma Triatoma megista Triatoma rubrofasciata	9	5	4
Arachnida introduction	5	5	
Family: Ixodidae (Hard Ticks) **Genus:** Ixodes Ixodes spinipalpis Ixodes nipponensis Ixodes ricinus Ixodes japanensis Ixodes persulcatus Ixodes scapularis Ixodes marxi Ixodes redikorzevi Ixodes holocyclus Ixodes cookei Ixodes dammini Ixodes pacificus **Genus:** Hyalomma Hyalomma marginatum marginatum **Genus:** Dermacentor Dermacentor variabilis Dermacentor pictus Dermacentor andersoni Dermacentor albipictus Dermacentor nutalli **Genus:** Amblyomma Amblyomma americanum Amblyomma variegatum **Genus:** Rhipicephalus Rhipicephalus evertsi Rhipicephalus rossia Rhipicephalus simus **Genus:** Haemaphysalis Haemaphysalis flavis (Soft Ticks) **Genus:** Argas Argas persicus Argas arboreus Argas reflexus **Genus:** Otobius Otobius megnini Otobius lagophilus **Genus**: Ornithodoros Ornithodoros moubata moubata	25	5	20
Mites **Genus:** Dermanyssus Dermanyssus gallinae	11	7	4

Genus: Ornithonyssus Ornithonyssus bacoti Ornithonyssus bursa Ornithonyssus nagayoi **Genus**: Dermatophagoides Dermatophagoides pternyssinus Dermatophagoides farinae **Genus:** Glyophagus Glycophagus spp. **Genus:** Tyrophagus Tyrophagus spp.			
Genus: Sarcoptes Sarcoptes scabiei	5	5	-
Genus: Demodex Demodex folliculorum **Genus**: Trombucula Trombicula akamuchi	5	5	-
SUBCLASS ARANAE (SPIDERS) Latrodectus mactans (Widow spider)	5	5	
CLASS CRUSTACEA **Genus:** Diaptomus **Genus:** Cyclops	9	5	4
CLASS PENTASTOMIDA Lingatula serrata (Tongue worm) Armillifer armillatus Armillifer moniliformis	7	7	-
Slide preparation	37	7	30
Arthropods total	234	130	104
Introduction to protozoa	5	5	-
Genus: Entamoeba Entamoeba histolytica Entamoeba hartmani Entamoeba dispar	11	7	4
Entamoeba coli Entamoeba polecki Entamtoeba gingivali **Genus**:Endolimax Endolimax nana **Genus**: Iodamoeba Iodamoeba butschlii	11	7	4
Genus: Acanthamoeba Acanthamoeba hatchetti Acanthamoeba palestinensis Acanthamoeba astronyxis **Genus**: Hartmannella Hartmannella	9	7	2
Genus: Naegleria Naegleria fowleri Naegleria gruberi	12	10	2

Genus: Retortamonas Retortamonas intestinalis. **Genus**: Chilomastix Chilomastix mesnili **Genus**: Enteromonas Enteromonas hominis **Genus**: Giardia Giardia lamblia **Genus**: Dientamoeba Dientamoeba fragilis	19	15	4
Family: Trichomonadidae **Genus**: Trichomonas Trichomonas hominis Trichomonas tenax Trichomonas vaginalis	11	7	4
Genus: Leishmania **Subgenus:** Leishmania **Complexes :** Leishmania donovani L. donovani donovani L .donovani infantum Leishmania tropica L. tropica minor L. tropica major L. aethiopica aethiopica Leishmania mexicana L. mexicana mexicana L. mexicana amazonensis L. mexicana pifanoi L. mexicana venzuelensis L. mexicana enreitii **Subgenus:** Viannia **Complexes:** Leishmania braziliensis L. braziliensis braziliensis L. braziliensis colombiensis	17	13	4
Genus: Trypanosoma **Subgenus**: Trypanozoon Trypanosoma brucei Trypanosoma brucei gambiens Trypanosoma brucei rhodesiense Trypanosoma cruzi **Subgenus:** Tejararia Trypanosoma rangeli Non-human Trypanosomes of different animals: - Trypanosoma lewisi - Trypanosoma congolense - Trypanosotma evansi - Trypanosoma vivax	17	13	4

- Trypanosoma brucei			
PHYLUM APICOMPLEXA **Genus**: Plasmodium Plasmodium vivax Plasmodium ovale Plasmodium malariae Plasmodium falciparum	19	13	8
Genus: Babesia Babesia divergens Babesia microti Babesia bigemina	14	10	4
Genus: Cryptosporidium Cryptosporidium parvum Cryptosporidium bovis Cryptosporidium muris **Genus:** Cyclospora Cyclospora cayetanensis **Genus**: Eimeria Eimeria perforans Eimeria stidae Eimeria clupearum Eimeria tenella Eimeria bovis Eimeria suis **Genus**: Isospora Isospora belli Isospora felis Isospora canis Isospora suis **Genus**: Sarcocystis Sarcocystis lendemanni Sarcocystis bovihominis Sarcocystis suihomonis Sarcocystis muris	19	15	4
Genus: Toxoplasma Toxoplasma gondii	7	5	2
PHYLUM MICROSPORA **Genus**: Nosema Nosema bombycis Nosema connori **Genus** : Encephalitozoon Encephalitozoon hellem Encephalitozoon cuniculi Encephalitozoon **Genus**: Enterocytozoon Enterocytozoon bienusi	7	5	2
PHYLUM CILIOPHORA **Genus**: Balantidium Balantidium coli	15	15	-
Slide preparation	30	18	12

Protozoa	249	155	94
Immunity	19	19	-
Immunology and evasion in helminthes	43	13	30
Immunology and evasion in protozoa	32	12	20
Immunology	70	20	50
Total	**1020**	**570**	**450**
Credit	**53**	**38**	**15**

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.

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 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule :

Assessment 1 …Review… week: 28-30

Assessment 2 …Review… week: 58-60

Assessment 3… Preparing 3 lectures on different subjects at the student level each for 30 minutes.

Tested items:1- Suitable data level. = %

2- Time management= %

3- Modern data= %

4- Using available technology= %

5- Using educational strategies = %

6- Acceptable presentation and computer skills = %

Assessment 4… Practical lessons attendance (2 years- 30 lessons) at least 75%= yes – no)

Assessment 5.. Criticize in a scientific pattern at least 15 published papers in the different branches of Medical Parasitology= yes No

Assessment 6….. Log book…week: 80 (14 C.Hs)

Assessment 7…..slides box (100)…week ….80

Assessment 8…..practical notebook…week….80

Assessment 9…. Final written exam…. Week …96-100...(24 month)

Assessment 10…..Practical exam. & OSPE Week…96-100.

Assessment 11…..Final oral exam…….. week….96-100.

Weighting of Assessments

Periodic Examinations	=10% including:
2 Reviews…	week: 28-30= Pass
Log book…	week: 100 = 3%
slides box (75)…	week ….100= 5%
practical notebook…	week….120=2%
Final written Examination	40%
Structured oral Examination.	20%
OSPE	20 %
Total	100%

6. List of References

6.1- Lecture notes

6.2- Essential Books (Text Books)

Medical Parasitology.
Essential Parasitology.
Worms and human diseases.
Clinical Parasitology.
Foundations of 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

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.
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