إعتماد توصيف مقررات برنامج الدبلوم فى الميكروبيولوجيا الطبية والمناعة

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمى لدرجة الدبلوم فى الميكروبيولوجيا الطبية والمناعة والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام

م	اسم المقرر	اسم منسق المقرر	التوقيع	اسم رئيس القسم	التوقيع
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عميد الكلية

وكيل الكلية للدراسات العليا

Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	١٠/١٢/٢٠١١
- Prof. Ahmad K. Mansur	Mansura	٢٨/١١/٢٠١١

Program Specifications of Diploma Degree of Medical Microbiology & Immunology

Sohag University **Faculty of Medicine**

A. **Basic Information**

١. Program title: Diploma Degree in Medical Microbiology & Immunology

٢. Program type: single

٣. faculty: Faculty of Medicine

٤. Departments: Medical Microbiology & Immunology

٥. Coordinator: Prof. Abeer M. Shenief.

٦. Assistant Coordinator: assistant lecturer: Tamer Mohamed Mahmoud.

٧. External evaluator: Prof. Osama Shams-eldin Raslan

٨. Last date of program specifications approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣.

B. Professional Information:

١. <u>Program aims:</u>

The aim of this program is to provide the postgraduate student with the medical knowledge and skills essential for the professional practice of Medical Microbiology & Immunology and through providing:

١. Scientific knowledge essential for practice of Medical Microbiology& Immunology according to the NARS.

٢. Laboratory skills necessary for proper diagnosis and management of problems in the field of Medical Microbiology& Immunology, including diagnostic, problem solving, and decision making.

٣. Ethical principles related to the practice in this specialty.

٤. Active participation in community needs assessment and problems solving in this specialty.

٥. Maintenance of learning abilities necessary for continuous medical education.

٢. <u>Attributes of the post graduate:</u>

١. Application of the specific knowledge gained during practice of Microbiology and Immunology.

٢. Identification of professional problems in this specialty and suggest solutions for them.

٣. Mastering professional skills and usage of suitable technologies in practice of Microbiology and Immunology.

٤. Ability to efficiently communicate and lead team works throughout organized professional work.

٥. Decision making at the lights of the available information.

٦. Perfect utilization of available resources.

٧. Awareness of his role in community development and maintain good environment.

٨. Reflects the commitment to act with integrity, credibility and professional norms and accountability.

٩. Recognize the need to develop himself and to engage in continuous learning.

٣. Intended learning outcomes (ILOs):

a) Knowledge & Understanding:

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

a١. List the microbes affecting human beings all over the world including bacteria, viruses and fungi.
a٢. Mention the geographical distribution and impact of each microbe in health and disease.
a٣. List the pathology, clinical symptoms and complications of each microbe.
a٤. List the laboratory tests needed for diagnosis of each case.
a٥. List the antibiotics and instructions used for treating each case, especially as regards drug complications and interactions.
a٦. Mention the basics of infection control measures, and their ever increasing role in disease prevention
a٧. Enumerate the basics of the immune system, and the role it plays in health and disease.
a٨. Define bacterial genetics and its implications with human genetics.
a٩. Describe the role of molecular genetics and molecular biology applications in general.
a١٠. List the principles and fundamentals of ethics and legal aspects of professional practice in the field of microbiology & immunology.
a١١. Enumerate the principles and fundamentals of quality of professional practice in the field of microbiology & immunology
a١٢. Enumerate the effect of professional practice on the environment and the methods of environmental development and maintenance.
a١٣. List methods of data collection and analysis.
A١٤. describe the basics of other optional courses related to the program

- Haematological diseases.
- Medical Parasitology
- Pathology
- Public health and community medicine.
- Medical biochemistry.

b) Intellectual Skills:

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

b١. Identify and analyze the information in the field of microbiology & immunology and ranking them according to their priorities.
b٢. Solve Problems in the area of microbiology & immunology
b٣. Analyze researches and issues related to microbiology & immunology
b٤. Assess risk in professional practices in the field of microbiology & immunology
b٥. Make professional decisions in light of the available data.
b٦. Integrate other optional course related to the program

- Haematological diseases.
- Medical Parasitology
- pathology
- Public health and community medicine.

- Medical Biochemistry

c) Professional and Practical Skills:

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

c١. Apply of professional skills in the field of microbiology & immunology.
c٢. Write laboratory medical reports.
c٣. Use appropriate technology in the field of microbiology & immunology.
c٤. Mention the basic skills

- Haematological diseases.
- Medical Parasitology
- Pathology
- Public health and community medicine.
- Medical biochemistry.

d) General and Transferable Skills:

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

d١. Use the different types of effective communication.
d٢. Use of information technology to serve the development of professional practice.
d٣. Assess himself and identify of personal learning needs.
d٤. Use of different sources to obtain information and knowledge.
d٥. Work in a team and manage time.
d٦. Lead a team in familiar professional contexts.
d٧. Teach himself continuously

٤. 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 N٠,٦٨٥٤, in its cession N٠,١٧٧ Dated: ١٨/٥/٢٠٠٩. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were revised by external evaluator, and approved by Faculty Council decree N٠,٧٥٢٨, in its cession N٠,١٩١, dated: ١٥/٣/٢٠١٠. The adoption of NARS and the suggested ARS were approved by University council degree No ٥٨٧, in its cession No.٦٠. Dated ٢٦-١٢-٢٠١١.

٥. Curriculum structure and contents:

٥. a- Program duration: ٣ semesters(١,٥ years).
٥. b- Program structure: (١st part: ٢٢٥ hours)
(٢nd part: ٦٧٥ hours)

	Hours/week		
Subject	**Lectures**	**Practical**	**clinical**
First Part:			
Minors: Bio Statistics & Computer	١	٢	----
Optional courses: One of the following: • Medical Biochemistry • Medical Parasitology • Pathology • Public health & Community Medicine • Clinical pathology	٧ ٧ ٧ ٧ ٧	١٠ ١٠ ١٠ ١٠ ١٠	----- ----- ----- ----- ------
Second Part:			
• Medical Microbiology & Immunology	١١	٨	-----

code	Item		No	%
b.i	Total credit hours	Compulsory	٤١	١٠٠
		Elective	٠	٠
		Optional	٠	٠
b.iii	credit hours of basic sciences courses		١٢	٢٩,٢٧
b.iv	credit hours of courses of social sciences and humanities		٠	٠
b.v	credit hours of specialized courses:		٢٧	٦٥,٨٥
b.vi	credit hours of other course		٢	٤,٨٨
b.viii	Program Levels (in credit-hours system): Level ١: ١st part Level ٢: ٢nd Part		 ١٤ ٢٧	 ٣٤,١٥ ٦٥,٨٥

٦. Program Courses

Two compulsory courses + ١/٥ optional course

٦,١- Level /year of program.. .١st part ....semester...١

a.Compulsory:

Course title	Total No. of credit hours	No. of hours / week		Program ILO Covered
		Lect.	Lab.	
Bio Statistics	٢	١	٢	a١٣-b٣-b٥-c٣-d١-d٢-d٣-d٤-d٥

c. Optional:

Medical Biochemistry	١٢	٧	١٠	a١٤-b٦-c٤-d١-d٢-d٤-d٥
Medical Parasitology	١٢	٧	١٠	a١٤-b٦-c٢-c٤-d١-d٢-d٤-d٥
Pathology	١٢	٧	١٠	a١٤-b٦-c٤-d١-d٢-d٣-d٤-d٥-d٦
Public health &community medicine	١٢	٧	١٠	a١-a٢-a٦-a١٣-a١٤-b١-b٢-b٥-b٦-c٤-d١-d٢-d٤-d٥-d٦
Clinical pathology	١٢	٧	١٠	a١٤-b٦-c٢-c٤-d١-d٢-d٣-d٤-d٥-d٦

Second Part:

- Level /year of program.. .٢nd part ....semester...٢&٣

Course title	**Total No. of credit hours**	**No. of hours / week**		**Program ILO Covered**
		Lect.	**Lab.**	
Medical Microbiology & Immunology	٢٧	١١	٨	a١:a١٢-b١:b٥-c١:c٣-d١:d٧

٧. Program admission requirements

General Requirements:

A. Candidates should have either:

١- MBBCh degree from any Egyptian faculty of medicine or

٢- Equivalent degree from medical schools abroad approved by the ministry of higher education.

B. Candidates should complete the house officer training year

C. Follow postgraduate regulatory roles of Sohag faculty of medicine

Specific Requirements:

A. Candidates graduated from Egyptian Universities should have at least (good rank) in their final year/cumulative years examination and grade (good rank) in microbiology & immunology too.

٨. Regulations for progression and program completion

Duration of program is ٣ semesters (١,٥ years), starting from registration till the ٢nd part exam; divided to:

First Part: (≥٦ months=١ semester):

a. Program related basic science.
b. At least six months after registration should pass before the student can ask for examination in the ١st part.
c. Two sets of exams: ١st in April — ٢nd in October.
d. For the student to pass the first part exam, a score of at least ٦٠٪ in each curriculum is needed (at least ٤٠٪ of the written exam).
e. Those who fail in one curriculum need to re-examine it only.

Second Part: (≥١٢ months=٢ semesters):

a. Program related specialized science of Medical Microbiology & Immunology courses.
b. After passing at least - actual work for ٣٦ months as demonstrator/trainee in the department of microbiology & immunology.

-The student should pass the ١st part before asking for examination in the ٢nd part
-Two sets of exams: ١st in April-٢nd in October.
- For the student to pass the ٢nd part exam, a score of at least ٦٠٪ in each curriculum is needed (at least ٤٠٪ of the written exam).

٩. Methods of student assessments:

Method of assessment	The assessed ILOs
١-Research assignment	- General transferable skills, intellectual skills
٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
٣-OSPE	-Practical skills, intellectual skills
٤-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment schedule:

Part I:
- Written Exam (٣ hours): for one of the branches of specialization optional + Structured oral Exam + OSPE.

Part II:
- Medical Microbiology & Immunology: Two Written Exams (٣ hours for each) + Structured oral Exam + OSPE.

١٠. Evaluation of program:

Evaluator	Tool	Sample
١- Senior students	Questionnaire	٤
٢- Alumni	Questionnaire	٢
٣- Stakeholders (Employers)	Questionnaire	١٠
٤-External Evaluator(s) (External	Report	١

Examiner(s))		
٥- Other		

Course Specifications of Medical Biochemistry in diploma degree in Medical Microbiology & Immunology

University /Sohag **Faculty/ Medicine**

١. Program on which the course is given: diploma degree in Medical Microbiology & Immunology

٢. Major and Minor element of program: Minor

٣. Department offering the course: Medical Biochemistry Department

٤. Department offering the program: Medical Microbiology & Immunology Dep.

٥. Academic year/level: ١st part

٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of Medical Biochemistry in diploma degree in Medical Microbiology & Immunology

Code: BIO ٠٥١٥-١٠٠.

title	Practical	Lectures	Total	Credit hours
Medical Biochemistry	١٥٠ h\ course	١٠٥ h\ course	٢٥٥ h\ course	١٢

B. Professional Information

١. Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to be clinical biochemist that is clever enough to make appropriate decision, manage all available biochemical assays and set up sharp eye to explore and chase every data what ever and gather snatches to help in reaching to hidden diagnosis.

٢. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and Understanding:

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

a١. Mention the biochemical importance of intermediary metabolism (Anabolic and catabolic)

a٢. The importance of clinical biochemistry

a٣. Explain the role of vitamin, Minerals

a٤. To know and explain hormonal action

b) Intellectual Skills

b١. Diagnosis the affected biochemical deficiency

b٢. Integrate basic biochemical and physiological facts with clinical data

b٣. How to diagnose early and treatment as early as possible

c) Professional and Practical Skills

c١. To identify the biochemical defect

c٢. To perform some laboratory tests for early diagnosis**.**

d) General and Transferable Skills

d١. Ability to listen and understanding any biochemical lecture.

d٢. Use standard computer programs effectively (window, office programs).

d٣. Utilize computers in conducting research and to collect scientific data.

d٤. Team working for accurate diagnosing of diseases using internet.
d٥. Acquiring skills to use computer to enter biochemistry web sites and self learning.

٣. Contents

Topics	No. Of hrs	Lectures	Practical
(١)Biological oxidations include: -General consideration. -Electron transport. -ATP-synthesis. -Translocations. -Superoxide dismutase.	١٠	٥	٥
(٢) Glycolysis and citric acid cycle: - General consideration. -Enzyme structure and reaction mechanisms. -Regulation mechanisms and biomedical importance.	١٠	٥	٥
٣) 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 phosphorylate: structure and catalytic activities. -Regulation -Genetic diseases C-Metabolism of other hexoses and biosynthesis of mucopolysaccharides. tails	١٠	٥	٥
(٤) 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.	١٠	٥	٥
(٥)Protein metabolism: -General consideration -Amino acids degradation: General reaction, nitrogen disposal and ammonia	١٠	٥	٥

disposal. -Nitrogen fixation. -One carbon metabolism. -Individual amino acids metabolism.			
٦) Integration of metabolism: - Mechanisms and regulation	١٠	٥	٥
٧) Metabolism of nucleotides: -General considerations -Purin and pyrimidine biosynthesis. -Ribonucleotide reductase –thioredoxin and Glutaredoxin, Thymidylate synthase and dihydrofolate reductase -Uric acid -Genetic diseases.	١٠	٥	٥
٨) Porphyrin metabolism and heam biosynthesis and catabolism	١٠	٥	٥
(٩) Mineral metabolism Tissue chemistry	١٠	٥	٥
(١٠) Eukaryotic chromosomes Gene Expression : -Nucleosome and chromatin. -Mitochondrial DNA. -DNA structure :replication and repair: -Structure. -Nucleases and ligases. -DNA topology and topoisomerases. -DNA polymerases. -Origin and direction of replication. Biochemistry of osteoarthritis	١٠	٥	٥
(١١)Hormones -Classification, mechanisms of actions. -Pituitary and hypothalamic hormones. -Thyroid and parathyroid hormones. -Hormones of the adrenal cortex and medulla. -Hormones of the Gonads. -Hormones of the pancreas and G.I.T tract. -Biochemistry of osteoporosis	١٥	٧	٨
(١٢)-Tumor markers.	١٥	٧	٨
(١٣) Metabolism of xenobiotics.	١٥	٧	٨
(١٤)Body fluid : -Blood, urine,-semen, C.S.F, bile, gastric juice, milk.	١٢	٢	١٠
(١٥)Minerals: Calcium, phosphate, Na, k, mg, Cu, iron, zinc, iodine ,mercury, Cd, florid, lead ,and others trace elements .	١٤	٤	١٠

(١٦)Immnoglobulins	١٥	٧	٨
(١٧)Physical chemistry	١٢	٢	١٠
(١٨)Free radicals	١٥	٧	٨
(١٩)Enzymes: -kinetics -Mechanism of action -Regulation	١٤	٤	١٠
(٢٠)Vitamin: -Water soluble vitamin. -Fat soluble vitamin	١٣	٣	١٠
(٢١)Control of gene expression in prokaryotes. -Recombinant DNA technology. -Protein Targeting. -Signal sequences and recognition. -Golgi complexes. -Targeting to mitochondria –chloroplasts and nuclei. -Targeting in bacteria. -Protein degradation: Ubiquitin-mediated proteolytic pathway and regulation.	١٥	٥	١٠
total	٢٥٥	١٠٥	١٥٠
Credit hours	١٢	٧	٥

٤. Teaching and Learning Methods

٤,١- Lectures

٤,٢- Searches in computers (assignments)

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills
٥,٥ Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

١- Assessment ١: written examination week ٢٤

٢- Assessment ٢: Structured Oral Exam week ٢٤

٣-Assessment ٣… OSPE ……. ٢٤week

٤- Assessment of attendance & absenteeism throughout the course

Weighting of Assessments

Final-term written examination	٥٠%
Structured Oral Exam	٣٠٪
OSPE	٢٠٪
Total	١٠٠٪

Formative only Assessment: simple research assignment, attendance and absenteeism

٦. List of References

٦,١- **Course Notes**: lectures notes prepared by the staff member in the department

٦,٢- **Essential Books (Text Books)**

١. Text book of medical biochemistry with clinical Devlin, JM ١٩٩٤
٢. Harper's biochemistry, Murray, RK ٢٠٠٥

٦,٣- **Recommended Books**

١. Lectures notes on clinical biochemistry, Whitby et al ١٩٩٣
٢. Lippincott's illustrated reviews biochemistry, Champe, PC, Harvey, RA, ٢٠٠٥

٦,٤- **Periodicals, Web Sites, … etc**

١. http://www.ncbi.nlm.gov/
٢. http://www.vlib.org/
٣. www.genome.ad.jp/kegg/regulation.
٤. Findarticle.com
٥. Freemedicaljournals.com

٧. Facilities Required for Teaching and Learning:

١-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

٢- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, scanner, copier,.

٣- COMPUTER PROGRAM: for designing and evaluating MCQs

Course Coordinator: Dr. Aida Abdeen Mohamed

Head of Department: Dr. Nagwa Sayed Ahmed Hassan

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Medical Parasitology in diploma degree in Medical Microbiology & Immunology

University /Sohag **Faculty/ Medicine**

١. Course Specifications Program on which the course is given: diploma degree in Medical Microbiology & Immunology

٢. Major and Minor element of program: Minor

٣. Department offering the course: Medical Parasitology Department

٤. Department offering the program: Medical Microbiology & Immunology. Dep.

٥. Academic year/level: ١st part

٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of Medical Parasitology in diploma degree in Medical **Microbiology & Immunology** **Code:** PAR ٠٥١٥-١٠٠.

Title	Practical	Lectures	Total	Credit hours
Medical Parasitology	١٥٠ h\ course	١٠٥ h\ course	٢٥٥ h\ course	١٢

B. Professional Information

١. Overall Aims of Course

By the end of the course the student should be able to have the professional knowledge of the parasites affecting human beings all over the world and particularly in Egypt, so to be able to professionally protect, diagnose and advice the parasite victim correctly.

٢. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty: the student is to be armed with sufficient knowledge about the human parasites present in his locality as well as Egypt, surrounding countries and idea to parasites allover the world. Each student should be able to recognize the symptoms, geographical distribution, the infective and the diagnostic stages, complications, laboratory tests needed for diagnosis, prescriptions used and control of the studied parasites. Parasitic vectors of bacteria, rickettsia and viruses are studied carefully.

a) Knowledge and Understanding:

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

a١. Mention the parasites affecting human beings all over the world and particularly in Sohag and Egypt.
a٢. Describe the life cycle of each, inside and outside the body.
a٣. Illustrate parasites on morphological bases.
a٤. Mention the clinical symptoms and complications of each parasite.
a٥. List the recommended laboratory tests needed for diagnosis of each case.
a٦. List control methods used against parasites.

b) Intellectual Skills:

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

b١. Differentiate between parasites affecting the same organ.
b٢. Differentiate between parasites present in the same sample.
b٣. Differentiate between parasites inhabiting the same geographical location.

c) Professional and Practical Skills:

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

c١. Identify the infective and the diagnostic stages of the parasites
c٢. Identify some stages of the parasites.
c٣. Identify some of the medically important intermediate host especially those present in Egypt.

d) General and Transferable Skills:

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

d١. Use the computer to enter parasitological web sites
d٢. Can collect scientific data from the computer as reviews, photos, and videos.
d٣. Can collect data from medical canters in the locality to recognize the local parasitic dangers.
d٤. Can work in groups, as a leader or as a college**.**

٣. Contents

Topic	No. of hours	Lecture	Practical
Introduction	٨	٣	٥
Helminthes			
Introduction+Trematoda introduction.	٩	٣	٦
Fasciola	٨	٣	٥
Dicrocilium+ Fasciolopsis buski	٩	٣	٦
H. heterophyes	٨	٣	٥
Schistosoma + Snails	٩	٣	٦
Revision	٨	٣	٥
Cestoda+ D. latum	٩	٣	٦
Taenia	٨	٣	٥
Echinococcus+ Hymenolepis+ Dipylidium	٩	٣	٦
Nematoda+ Eterobius+ T. trichura+ Capillaria+ T. spiralis+ Ascaris	٨	٣	٥
Hook worms+ S.stercoralis+ Larva migrans	٩	٣	٦
D. medenensis+ Filarial; worms	٨	٣	٥
Revision	٩	٣	٦
Arthropods			
Introduction	٨	٣	٥
Dieptera+ Mosquitoes	٩	٣	٦
Culicoides+ Phlebotomas	٨	٣	٥
Brachycera	٩	٣	٦
Myiasis & M. producing flies	٨	٤	٤
Siphonaptera+ Hemiptera+ Anoplura	٩	٤	٥
Arachnida introduction+ ticks	٨	٤	٤
Mites+ Pentastomida+ Cyclops	٩	٤	٥
Protozoa			
Introduction+ Amoebidae	٨	٤	٤
Luminal flagellates	٩	٤	٥

Haemoflagellates	٨	٤	٤
Apicomplexa (Malaria + Babesia)	٩	٤	٥
Apicomplexa (Toxoplasma + others)	٨	٤	٤
Ciliata+ Microsporidia	٩	٤	٥
Revision	٨	٤	٤
Laboratory tests	٩	٤	٥
Total	٢٥٥	١٠٥	١٥٠
Credit hours	١٢	٧	٥

٤. Teaching and Learning Methods

٤,١- lectures.

٤,٢- practical lessons.

٤,٣- Assignments for the students to empower and assess the general and transferable skills

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills
٥,٥ assignment	-General transferable skills, intellectual skills

Assessment Schedule

١- Assessment ١: written examination week ٢٤

٢- Assessment ٢: Structured Oral Exam week ٢٤

٣-Assessment ٣… OSPE …….٢٤week

٤- Assessment of attendance & absenteeism throughout the course

Weighting of Assessments

Final-term written examination	٥٠%
Structured Oral Exam	٣٠٪
OSPE	٢٠٪
Total	١٠٠٪

Formative only Assessment: simple research assignment, attendance and absenteeism

٦. List of References

٦,١- Course Notes: lectures notes prepared by the staff member in the department

٦,٢- Essential Books (Text Books)

Medical Parasitology.
Essential Parasitology.
Diagnostic Parasitology.

٦,٣- Recommended Books

A coloured Atlas of tropical Medicine and Parasitology.

٦,٤- Periodicals, Web Sites.

Journal of Egyptian Society of Parasitology.
Parasitic Diseases: http://www.mic.ki.se/Diseases/c٣.html
Parasite Images: http://www.med.cmu.ac.th/dept/parasite/image.htm
Atlas of Medical Parasitology: http://www.cdfound.to.it/HTML/atlas.htm

٧. Facilities Required for Teaching and Learning:

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

Course Coordinator: Dr .Eman KH. Mohamed

Head of Department: Prof. Nada Abd El Fatah El Nadi

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Pathology in diploma degree in Medical Microbiology & Immunology

University Sohag **Faculty of Medicine**

١. Program on which the course is given: diploma degree in Medical Microbiology & Immunology

٢. Major and Minor element of program: Minor

٣. Department offering the course: pathology Department

٤. Department offering the program: Medical Microbiology & Immunology Dep.

٥. Academic year/level: ١st part

٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of pathology in diploma degree in Medical Microbiology & Immunology

Code: PAT ٠٥١٥-١٠٠.

title	Practical	Lectures	Total	Credit hours
Pathology	١٥٠ h\ course	١٠٥ h\ course	٢٥٥ h\ course	١٢

B. Professional Information

١. Overall Aims of Course

By the end of the course the student should be able to have the professional knowledge of the pathological conditions affecting human beings all over the world and particularly in Egypt, so to be able to professionally protect, diagnose and advice the patients correctly.

٢. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a- Knowledge and Understanding:

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

a١. Develop understanding basis of general pathology.

a٢. Mention etiology, pathogenesis and pathologic manifestation of diseases especially those related to microbial infections.

a٣. Describe gross and histopathology with the clinical basis of diseases especially those related to microbial infections

b- Intellectual Skills:

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

b١. Interpret in a professional manner a pathology report.

b٢. Have a general idea about inflammation, degeneration necrosis, cell death & basic immunology

b٣. Data interpretation

c- Professional and Practical Skills:

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

c١.Identify the macroscopic and microscopic criteria of the altered structure (pathology) of the body and its major organs and systems that are seen in various diseases.

d- General and Transferable Skills:

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

d١. Use data analysis and communication skills.

d٢. Effectively utilize various computer based instruction tools and E-learning of Pathology and utilize a variety of computer-based self assessment tools.

d٣. Accept the limitation in knowledge and always strive for excellence.

d٤. Use the sources of biomedical information to remain current with the advances in knowledge and practice.

d٥. Be reliable and responsible in fulfilling obligations.

٣. Course contents:

Topic	No. of hours	Lecture	Practical
١- General Pathology:			
١,١. Inflammation & repair.	١٠	٥	٥
١,٢. Degeneration.	٥	٢	٣
١,٣. Cell death & necrosis.	٥	٢	٣
١,٤. Vitamin & nutritional deficiencies.	٥	٢	٣
٢- Immunology:			
٢,١. Basic immunology.	١٠	٥	٥
٢,٢. Immunopathology.	٥	٢	٣
٢,٣. Basics of organ transplant.	٥	٢	٣
٢,٤. Basics of transplant rejection.	٥	٢	٣
٢,٥. Techniques & immunohistochemistry & their role in diagnosis of diseases.	٥	٣	٢
٣- Pathology of microbial diseases:			
٣,١. General reactions to bacterial infections.	١٠	٣	٧
٣,٢. Bacteremia, toxemia, septicemia.	١٠	٣	٧
٣,٣. Pathology of tuberculosis.	١٠	٣	٧
٣,٤. Pathology of leprosy.	١٠	٣	٧
٣,٥. Pathology of syphilis.	١٠	٣	٧
٣,٤. Pathology of typhoid fever.	١٠	٣	٧
٣,٥. Bacillary dysentery.	١٠	٣	٧
٣,٦. Pathology of diphtheria.	١٠	٣	٧
٣,٧. General reactions to viral diseases &viremia.	١٠	٣	٧
٣,٨. Pathology & types of influenza.	١٠	٣	٧
٣,٩. Pathology of smallpox & chickenpox.	١٠	٣	٧
٣,١٠. Measles & German measles.	١٠	٣	٧
٣,١١. Poliomyelitis.	١٠	٥	٥
٣,١٢. Herpes simplex & herpes zoster.	١٠	٥	٥
٣,١٣. Pathology of AIDS	١٠	٥	٥
٣,١٤. Pathology of rabies.	١٠	٥	٥
٣,١٥. Pathology of CMV & EPV.	١٠	٥	٥
٣,١٦. Pathology of viral hepatitis.	١٠	٥	٥
٣,١٧. General reaction to mycotic diseases.	١٠	٥	٥

٣,١٨. Mycetoma pedis (Nocardiasis).	١٠	٥	٥
٣,١٩. Candidiasis (Moniliasis)	١٠	٥	٥
٣,٢٠. Histoplasmosis.	١٠	٥	٥
total	٢٥٥	١٠٥	١٥٠
Credit hours	١٢	٧	٥

٤. Teaching and Learning Methods

٤,١. Lectures.

٤,٢. Gross and histopathology (Jars & slides).

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills

Assessment Schedule

١- Assessment ١: written examination week ٢٤

٢- Assessment ٢: Structured Oral Exam week ٢٤

٣-Assessment ٣… OSPE ……. Week٢٤

٤- Assessment of attendance & absenteeism throughout the course

Weighting of Assessments

Final-term written examination	٥٠%
Structured Oral Exam	٣٠٪
OSPE	٢٠٪
Total	١٠٠٪

Formative only Assessment: simple research assignment, attendance and absenteeism

٦. List of References

٦,١- Course Notes: lectures notes **prepared by the staff member in the department**

٦,٢- Essential Books (Text Books):

- Principles of General and Special Pathology; Gamal Nada.
- Muir's text book of pathology.
- Robbins pathologic basis of diseases.

٦,٣- Recommended Books:

- Rosi &Ackerman text book of pathology.
- Sternberg text book of pathology.

٦,٤- Periodicals, American journal of pathology

Pathology Human pathology

Web Sites: http://www.ncbi.nlm.nih.gov/pubmed/

٧. Facilities Required for Teaching and Learning:

١. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

٢. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

Course Coordinator: Dr. Fatma Al Zahraa Salah El Deen

Head of Department: Dr. Eman Salah El Deen

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Public health and Community Medicine in diploma degree in Medical Microbiology & Immunology

University Sohag **Faculty of Medicine**

١. Program on which the course is given: diploma degree in Medical Microbiology & Immunology
٢. Major and Minor element of program: Minor
٣. Department offering the course: Public health and community medicine Department
٤. Department offering the program: Medical Microbiology & Immunology Dep.
٥. Academic year/level: ١st part
٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of Public health and community medicine in diploma degree in Medical Microbiology & Immunology
Code: COM ٠٥١٥-١٠٠.

Title	Practical	Lectures	Total	Credit hours
Public health and community medicine	١٥٠ h\ course	١٠٥ h\ course	٢٥٥ h\ course	١٢

B. Professional Information

١. Overall Aims of Course

١. To prepare a community-oriented physician capable of anticipating and responding to community health needs within the primary health care (PHC) setting according to the policies, regulations, and guidelines of the MOHP.
٢. To develop a post graduate who will apply the knowledge and skills learned, and is able to take leadership in motivating the community served.
٣. To influence the students to adopt a healthy lifestyle and sound behaviors to become role models for the individuals, families, and the communities they will serve in the future.

٢. Intended Learning Outcomes of Courses (ILOs)

a) Knowledge and understanding:

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

a١. Describe the infectious cycle .
a٢. Explain the three interacting ecological factors—agent, host, and environment—affecting the occurrence of disease.
a٣. Define methods of prevention and control for each of these diseases.
a٤. Identify the nature, health effects, and sources of environmental risks
a٥. List at least five essential public health functions
a٦. Define patterns of care as preventive and curative, and describe the levels of preventive care
a٧. Define clinical epidemiology and its basic components
a٨. Describe the public health surveillance system and its use in the community setting

b) Intellectual Skills

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

b١. Anticipate and participate in investigation of an epidemic/outbreak as part of a health team Evaluate indicators of health and disease
b٢. Identify prevalent health problems in a community, using various epidemiological strategies b.٣ Apply appropriate health promotion, disease prevention, and control measures
b٣. Participate in conducting public health surveillance.

c) Professional and Practical Skills:

By the end of the course, the student is expected to practice the following:
c١. Perform community diagnosis
c٢. Conduct Social & Health Surveys
c٣. Diagnose an epidemic

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:
d١. Communicate well with his colleagues, top management and subordinates.
d٢. Establish a good client – physician relationship.
d٣. Use standard computer programs effectively
d٤. Utilize computers in conducting researches.
d٥. Work in a group
d٦. Manage a group of people in a work environment

٣. Contents

Topic	No. of hours	Lecture	Practical
General introduction: Rationale of public health and epidemiology	٦	٣	٣
Terminology	٦	٣	٣
Infectious cycle:	٦	٣	٣
Agent	٦	٣	٣
Reservoir and sources of infection	٦	٣	٣
Exit	٦	٣	٣
Modes of diseases transmission	٦	٣	٣
Inlet	٦	٣	٣
Susceptibility and immunity	٦	٣	٣
Epidemiology of selected communicable diseases:	٦	٣	٣
Acute respiratory infections	٦	٣	٣
Streptococcal infections	٦	٣	٣
Diphtheria	٦	٣	٣
Meningitis	٦	٢	٤
Measles	٦	٢	٤
Mumps	٦	٢	٤
Rubella	٦	٢	٤
Poliomyelitis	٦	٢	٤
Diarrheal diseases	٦	٢	٤
Typhoid and paratyphoid fevers	٦	٢	٤
Food poisoning	٦	٢	٤
Brucellosis	٦	٢	٤

Hepatitis	٦	٢	٤
Aids	٦	٢	٤
Plague	٦	٢	٤
Rift valley fever	٦	٢	٤
Rabies	٦	٢	٤
Emerging and Remerging ds	٦	٢	٤
SARS	٦	٢	٤
Avian flue	٦	٢	٤
Viral heamorrahgic fevers.. Ebola, Lassa, Merbu	٦	٢	٤
Dengue fever	٦	٢	٤
Tuberculosis	٦	٢	٤
Locally endemic ds	٦	٢	٤
Tetanus	٦	٢	٤
Prevention and Control aspects of the ds	٦	٢	٤
Levels of Prevention in the community	٦	٢	٤
International classification of diseases	٦	٢	٤
International death certificate	٦	٢	٤
Global Environmental & Climate determinants of diseases	٥	٤	١
Community diagnosis, ds. Surveillance & Surveys	٥	٤	١
Investigation of an epidemic, the attack rates	٥	٤	١
Total	٢٥٥	١٠٥	١٥٠
Credit hours	١٢	٧	٥

٤. Teaching and Learning Methods

٤,١- Lectures.

٤,٢- field training

٤,٣- Computer search assignments

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills
٥,٦ Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment ١……..Final written exam week: ٢٤
Assessment ٢……..Final Structured Oral Exam week: ٢٤
Assessment ٣……Final OSPE week ٢٤
Assessment ٤…… Attendance and absenteeism throughout the course
Assessment ٥ …… Computer search assignment performance throughout the course

Weighting of Assessments

Final written examination	٥٠ %
Structured Oral Exam	٣٠ %
OSPE	٢٠ %
Total	١٠٠ %

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

٦. List of References

٦,١- Course Notes: lectures notes prepared by the staff member in the department

٦,٢- Essential Books (Text Books)

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

٦,٣- Recommended Books

١- Dimensions of Community Health, Boston Burr Ridge Dubuque.
٢- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.
٣- Epidemiology in medical practice, ٥th edition. Churchill Livingstone. New York, London and Tokyo.

٦,٤- Periodicals, Web Sites, … etc

١-American Journal of Epidemiology
٢-British Journal of Epidemiology and Community Health
٣- WWW. CDC and WHO sites

٧. Facilities Required for Teaching and Learning:

١. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
٢. 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: Prof/Eman Abd El-Baset Mohammed

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Clinical and Chemical Pathology in diploma degree in Microbiology & Immunology

Sohag University **Faculty of Medicine**

١. Program on which the course is given: diploma degree in Medical Microbiology & Immunology

٢. Major and Minor element of program: Minor

٣. Department offering the course: Clinical and Chemical Pathology Department

٤. Department offering the program: Medical Microbiology & Immunology Dep.

٥. Academic year/level: ١st part

٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of Clinical and Chemical Pathology in diploma degree in Medical Microbiology & Immunology

Code: CL.P ٠٥١٥-١٠٠.

Title	Practical	Lectures	Total	Credit hours
Clinical and Chemical Pathology	١٥٠ h\ course	١٠٥ h\ course	٢٥٥ h\ course	١٢

B. Professional Information

١. Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to be clinical haematologist that are clever enough to make appropriate decision, manage all available hematological and haemostatic assays and set up sharp eye to explore and chase every data what ever and gather snatches to help in reaching to hidden diagnosis.

٢. Intended Learning Outcomes of Course (ILOs):

a) Knowledge and Understanding:

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

a١. Review their informations about the physiology of blood cells (RBCs, WBCs and platelets) and homeostasis.

a٢. Review their informations about the anatomy of the lymphatic and hematopiotic organs.

a٣. List the important causes, presentation and management of various types of anemias.

a٤. List the important causes, presentation and management of various types of leukemias and lymphomas.

a٥. List causes, manifestation and management of bleeding and coagulation disorders.

b) Intellectual Skills:

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

b١. To interpret lab investigations as blood picture, bone marrow examination, results of lymph node, spleen biopsy.

b٢. To interpret lab investigations tests for coagulation disorders.

b٣. Examine lymph nodes, liver and spleen and to know causes and management of lymphadenopathy, hepatomegaly and splenomegaly.

c) Professional and Practical Skills:

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

c١. Perform a complete haematological examination.
c٢. Perform manual CBC and differentiation and recognition of various disease hematological pictures.
c٣. Perform different staining methods.
c٤. Perform bone marrow aspiration and its role in diagnosis for various haematological disorders.

d) General and Transferable Skills:

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

d١. Use communication skills
d٢. Uses information technology to serve the development of professional practice
d٣. Assesses himself and identifies personal learning needs.
d٤. Use the computer and internet to gather scientific information
d٥. Learn and teach how to perform and interpret laboratory tests
d٦. Work in a team.

٣. Contents

Topic	No. of hours	Lecture	Practical
(١) Haemotasis : ١.platelet disorders :			
a)thrombocytosis :	١٥	٥	١٠
b)thrombocytopenia :	١٥	٥	١٠
٢. coagulation disease :			١٠
a)haemophilia and vWD.	١٥	٥	
b)Acquired disease & Thrombophilia	١٥	٥	١٠
c)bleeding disase of neonates	١٥	٥	١٠
(٢) blood bank :			
١)Component of blood and preparation.	١٥	٥	١٠
٢)Indication of transfusion.	١٥	٥	١٠
٣)Hazards of transfusion.	١٥	٥	١٠
(٣) Oncology :			
١)Granulopoiesis	١٥	٥	١٠
٢)Disorder of granulopoiesis. (AML, CML, ALL, and CLL)	١٥	٥	١٠
(٤) RBCs :			
١) Haemopoiesis	١٥	٥	١٠
٢)Iron deficiency anemia.	١٥	١٠	٥
٣)Megaloblastic anemia.	١٥	١٠	٥
٤)Ablastic anemia	١٥	١٠	٥
٥)Sideroblastic anemia.	١٥	١٠	٥
٦)Haemolytic anemia.	١٥	١٠	٥
Total	٢٥٥	١٠٥	١٥٠
Credit hours	١٢	٧	٥

٤. Teaching and Learning Methods

٤,١- Lectures.
٤,٢- Department practical class and notes.
٤,٣- Practical lessons.

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills

Assessment Schedule

١- Assessment ١: written examination week ٢٤
٢- Assessment ٢: Structured Oral Exam week ٢٤
٣-Assessment ٣… OSPE week ٢٤
٤- Assessment of attendance & absenteeism throughout the course

Weighting of Assessments

Final-term written examination	٥٠%
Structured Oral Exam	٣٠٪
OSPE	٢٠٪
Total	١٠٠٪

Formative only Assessment: simple research assignment, attendance and absenteeism

٦. List of References

٦,١- Course Notes: lectures notes prepared by the staff member in the department

٦,٢- Essential Books (Text Books)

Essential Haematology of A. H.Hoffbrand

٦,٣- Recommended Books

Color Atlas of Haematology of Harald Theml.
Atlas of Clinical Haematology of Douglas C. Tkachuk..

٦,٤- Periodicals, Web Sites, etc

Journal of Haematology
American Journal of Haematology
www.pubmed.com

٧. Facilities Required for Teaching and Learning:

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

Course Coordinator: Dr. Lila M. Yousef
Head of Department: Prof .Hasnaa A. Abo elwafa

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Biostatistics in Diploma degree in Medical Microbiology & Immunology

Sohag University Faculty of Medicine

A. Basic Information

١. Program on which the course is given: Diploma degree in Medical Microbiology & Immunology

٢. Major and Minor element of program: Minor

٣. Department offering the course: public health and community medicine Department

٤. Department offering the program: Medical Microbiology & Immunology Dep.

٥. Academic year/level: ١st part

٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

Title: Course Specifications of biostatistics in Diploma degree in Medical **Microbiology & Immunology**

Code: COM ٠٥١٥-١٠٠.

Total hours:

lectures	practical	Total hour	Credit hours
١٥	٣٠	٤٥	٢

B. Professional Information

١. Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to Apply biostatistics

٢. Intended Learning Outcomes of Courses (ILOs)

a) Knowledge and understanding:

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

a١. Define the sources of data and methods of collection for vital statistics.
a٢. Describe sampling techniques and list at least three advantages of sampling.
a٣. Summarize data, construct tables and graphs.
a٤. Calculate measures of central tendency and measures of dispersion.
a٥. Describe the normal curves and its uses.
a٦. Define the screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.
a٧. Describe the study design, uses of different types.
a٨. List the basics and ethics of scientific research.

b) Intellectual Skills

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

b١. Analyze and evaluate information and data in the field and interpret data in accordance.
b٢. Collect and verify data from different sources.
b٣. Organize and manage data, including graphic and tabular presentations.

b٤. Use self learning skills in solving problems.
b٥. Use analytical skills in anticipating risks and risk assessment.
b٦. Perform criticism on published papers and scientific material

c) Professional and Practical Skills:

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

c١. Mention the basic and professional skills in Biostatistics.
c٢. Assess methods and tools used in collection and interpretation of data.

d) General and Transferable Skills:

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

d١. Communicate Effectively by its different types.
d٢. Uses information technology to serve the development of professional practice
d٣. Assesses himself and identify personal learning needs.
d٤. Use different sources to obtain information and knowledge.
d٥. Develop rules and indicators for assessing the performance of others.
d٦. Learn himself Continuously

٣. Contents

Topic	No. of hours	Lecture	Practical
١. Introduction to research Terminology and rationale	٤	٢	٣
٢. Data collection methods	٢	٠,٥	١,٥
٣. Types of Data	٢	٠,٥	١,٥
٤. Tabulation of data	٢	٠,٥	١,٥
٥. Graphical presentation of data	٢	٠,٥	١,٥
٦. Measures of central tendency	٢	٠,٥	١,٥
٧. Normal distribution curves	٢	٠,٥	١,٥
٨. Study design.	٢	٠,٥	١,٥
٩. Cross sectional study and the	٢	٠,٥	١,٥
١٠. prevalence rate	٢	٠,٥	١,٥
١١. Cohort study, incidence rate, relative & attributable risk	٢	٠,٥	١,٥
١٢. Case-control study, Odd's ratio	٢	٠,٥	١,٥
١٣. Sampling	٢	٠,٥	١,٥
١٤. Screening and evaluation of screening tests	٢	٠,٥	١,٥
١٥-Basics of selected tests of of significance Student T test	٢	٠,٥	١,٥
١٦- Paired T test	٢	١	١
١٧-Chi square test	٢	١	١
١٨- Case series	٢	١	١
١٩- Ecological studies	٢	١	١
٢٠-Correlatioal studies	٢	١	١
٢١-Details of Analytical studies	٢	١	١
٢٢-Basics of experimental studies	١	٠,٥	٠,٥
٢٣-Comments on tables and graphic presentation	٢	١	١
Total	٤٥	١٥	٣٠
Credit hours	٢	١	١

٤. Teaching and Learning Methods

٤,١- Lectures.

٤,٢- Practical sessions.

٤,٣- Computer search assignments

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills
٥,٥ Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment ١……..Final written exam….. week: ٢٤
Assessment ٢……..Final Structured Oral Exam **….. week: ٢٤**
Assessment٤……Final OSPE……. week ٢٤
Assessment ٣…… Attendance and absenteeism throughout the course
Assessment ٤ …… Computer search assignment performance throughout the course

Weighting of Assessments

Final written examination	% ٥٠
Structured Oral Exam	% ٣٠
OSPE	% ٢٠
Total	١٠٠ %

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

٦. List of References

٦,١- Essential Books (Text Books)

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

٦,٢- Recommended Books

١- Dimensions of Community Health, Boston Burr Ridge Dubuque.

٢- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.

٣- Epidemiology in medical practice, ٥th edition. Churchill Livingstone. New York, London and Tokyo.

٦,٣- Periodicals, Web Sites, … etc

١-American Journal of Epidemiology

٢-British Journal of Epidemiology and Community Health

٣- WWW. CDC and WHO sites

٧. Facilities Required for Teaching and Learning:

١-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

٢- 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.

٣- COMPUTER PROGRAM: for designing and evaluating MCQs

Course Coordinator: Dr/Ahmed Fathy Hammed

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

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣

Course Specifications of Medical Microbiology and Immunology in diploma degree in Medical Microbiology & Immunology

Sohag University **Faculty of Medicine**

١. Program on which the course is given: diploma degree in Medical Microbiology & Immunology
٢. Major and Minor element of program: major
٣. Department offering the course: Medical Microbiology & Immunology Dep.
٤. Department offering the program: Medical Microbiology & Immunology Dep.
٥. Academic year/level: ٢nd part
٦. Date of specification approval: Faculty council No. "٢٥٠", decree No. "١٣٧٨" dated ٢٨/١٢/٢٠١٣

A. Basic Information

Title: Course Specifications of Medical **Microbiology and immunology in diploma degree in** Medical **Microbiology & Immunology**
Code: MIC ٠٥١٥-١٠٠.

title	practical	lectures	total	Credit hours
Medical **Microbiology and Immunology**	٣٣٠	٢٤٠	٥٧٠	٢٧

B. Professional Information

١. Overall Aims of Course

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

have basic knowledge of the microorganisms affecting human beings all over the world and particularly in Egypt , and learn to use the knowledge gained from applied microbiology to better understand the pathology, clinical symptoms, complications and the laboratory tests needed for diagnosis of each disease, in particular how to use microbiological testing in determining antibiotic prescription. The student is also expected to acquire advanced knowledge about the structure and function of the immune system and the role of the immune system in health and disease.

٢. Intended Learning Outcomes of Course (ILOs):

a) Knowledge and Understanding:

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

a١. List the microorganisms (bacteria, viruses and fungi) affecting human beings all over the world and particularly in Egypt.
a٢. Mention the geographical distribution of each microbe.
a٣. Describe the pathology, clinical symptoms and complications of each disease
a٤. Summarize the laboratory tests needed for diagnosis of each case.
a٥. Name the drugs and instructions used for treatment of each case.

a٦. List the drug complications and interactions.
a٧. Describe some infection control methods for prevention of diseases
a٨. Describe the structure and function of immune system
a٩. Describe the metabolism and genetics of organisms.
a١٠. Recognize the role of molecular genetics and molecular biology applications in general.
a١١. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of microbiology & immunology.
a١٢. Enumerate the principles and fundamentals of quality of professional practice in the field of microbiology & immunology
a١٣. Describe the effect of professional practice on the environment and the methods of environmental development and maintenance

b) Intellectual Skills:

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

b١. Differentiate between the different microorganisms (Bacteria, viruses and fungi)
b٢. Mention the basic structure and function of different microbes.
b٣. Mention the role of the immune system in health and disease.
b٤. Differentiate between the different types of disease causing microbes.
b٥. Mention the pathogenesis, laboratory diagnosis and management of each group of infectants (bacteria, viruses and fungi) .
b٦. Determine the antibiotic regimen based on previous microbiological experience and laboratory tests.
b٧. Determine the involvement of the immune system in the current disease process.
b٨. Analyze researches and issues related to microbiology & immunology
b٩. Assess risk in professional practices in the field of microbiology & immunology
b١٠. Analyze given data and use it in problem solving.

c) Professional and Practical Skills:

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

c١. Recognize micro-organisms on morphological bases.
c٢. Identify the methods of staining, culturing and biochemical reactions.
c٣. Recognize some serological tests used in diagnosis.
c٤. Recognize how to handle samples.
c٥. Write and Interpret reports containing microbiological or immunological data.
c٦. Use appropriate technology in the field of microbiology & immunology.

d) General and Transferable Skills:

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

d١. Use data analysis and communication skills
d٢. Use information technology to serve the development of professional practice
d٣. Assess himself and identification of personal learning needs.
d٤. Use the computer and internet to gather scientific information.
d٥. Be reliable and responsible in fulfilling obligations
d٦. Work in a team, and team's leadership in various professional contexts.
d٧. Manage time efficiently.

٣. Contents

Topics actually taught	No. of hours	lectures	practical
I. Bacteriology & Mycology:			
١. Prokaryotic cell structure Cell wall- Cell membrane-Directed movement of molecules across cytoplasmic membrane (transport & secretion)- Surface layers external to cell wall- Filamentous protein appendages- Internal structures	٢	٢	---
٢. Dynamics of prokaryotic growth Principles of bacterial growth- Factors influencing bacterial growth (environmental & nutritional)- Bacterial growth in lab. conditions (growth curve- colony growth- continuous culture)- Bacterial growth in nature (bacterial communities interactions- biofilms)	٢	٢	---
٣. Control of microbial Growth in vitro Principles of control- Using heat, chemicals and radiation to destroy microorganisms- Removal of microorganisms by filtration- Preservation	٢	٢	---
٤. Bacterial Metabolism Central metabolic pathways- Respiration- Fermentation	٢	٢	----
٥. 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	٢	٢	---
٦. Identification and Classification of bacteria Principles of taxonomy- Phenotypic characteristics- Genotypic characteristics- Studying strain differences and relatedness	٢	٢	---
٧. Host Microbe interactions Anatomical barrier and normal flora- Principles of infectious diseases- Establishing the cause of infection- Bacterial pathogenesis and establishment of infection-	٢	٢	---
٨. Epidemiology of infectious diseases Principles of epidemiology- Epidemiological studies- Infectious disease surveillance- Trends in infection	٢	٢	---
٩. 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	٢	٢	---
١٠-Systemic bacteriology -Spore-Forming Gram-Positive Bacilli: Bacillus & Clostridium Species - Non-Spore-Forming Gram-Positive Bacilli: Corynebacterium, Propionibacterium	٢	٢	---

١١-The Staphylococci - The Streptococci	٢	٢	---
١٢-Enteric Gram-Negative Rods (Enterobacteriaceae	٢	٢	---
١٣-Pseudomonads, Acinetobacters, & Uncommon Gram-Negative Bacteria - Vibrios, Campylobacters, Helicobacter, & Associated ٦Bacteria	٢	٢	---
١٤-Haemophilus, Bordetella, Brucella, & Francisella - Yersinia & Pasteurella - The Neisseriae	٢	٢	---
١٥-Infections Caused by Anaerobic Bacteria - Mycobacteria	٢	٢	---
١٦-Spirochetes & Other Spiral Microorganisms - Mycoplasmas & Cell Wall-Defective Bacteria - Rickettsia & Ehrlichia - Chlamydiae	٢	٢	---
II. Virology:			
١. General properties of viruses , Classification and nomenclature of viruses	٢	٢	---
٢. Principles of virus structure	٢	٢	---
٣. Virus Genome Replication	٢	٢	---
٤. Pathogenesis and Control of Viral Diseases	٢	٢	---
٥. Viral Genetics	٢	٢	---
٦. Host Defenses against Viral Infection and Viral Counter defenses	٢	٢	---
٧. Antiviral drugs	٢	٢	---
٨. Viral vaccines	٢	٢	---
٩. Laboratory Diagnosis of Viral Infections	٢	٢	---
١٠Parvoviruses – Adenoviruses- Herpesviruses	٢	٢	---
١١-Poxviruses- Picornaviruses (Enterovirus & Rhinovirus Groups)	٢	٢	---
١٢-Hepatitis Viruses	٢	٢	---
١٣-Reoviruses, Rotaviruses, & Caliciviruses - Arthropod-Borne & Rodent-Borne Viral Diseases	٢	٢	---
١٤-Orthomyxoviruses (Influenza Viruses)- Paramyxoviruses & Rubella Virus	٢	٢	---
١٥-Coronaviruses - Rabies, Slow Virus Infections, & Prion Diseases - Human Cancer Viruses AIDS & Lentiviruses	٢	٢	---
Medical mycology			
General Properties & Classification of Fungi	٢	٢	
Superficial Mycoses ,Cutaneous Mycoses, Subcutaneous Mycoses and systemic Mycoses	٢	٢	
III. Immunology :			
١. Overview of the Immune System (Historical Perspective, Innate Immunity, Adaptive Immunity, Comparative Immunity, Immune Dysfunction and Its Consequences).	٢	٢	---
٢. Cells and Organs of the Immune System (Hematopoiesis, Cells of the Immune System, Organs of the Immune System (structure &function), lymphocyte	٢	٢	---

Recirculation).			
٣. Innate Immune Response (Mechanical and chemical barriers, Pattern recognition receptors, Phagocytosis, acute phase response, Leukocyte Migration and Inflammation).	٢	٢	---
٤. Cell-Adhesion Molecules, Chemokines—Key Mediators of Inflammation.	٢	٢	---
٥. Antigens (Immunogenicity Versus Antigenicity, Factors That Influence Immunogenicity, Epitopes, Haptens, Pattern-Recognition Receptors, Heterophil antigens, Adjuvants).	٢	٢	---
٦. 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).	٢	٢	---
٨. Major Histocompatibility Complex (General Organization and Inheritance of the MHC, MHC Molecules and Genes, Detailed Genomic Map of MHC Genes, Cellular	٢	٢	---
٩-Distribution of MHC Molecules, Regulation of MHC Expression, MHC and Immune Responsiveness, MHC and Disease Susceptibility)	٢	٢	---
١٠. 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).	٢	٢	---
١١. T-Cell Receptor (αβ and γƧ T-Cell Receptors: Structure and Roles, Organization and Rearrangement of TCR Genes, T-Cell Receptor Complex: TCR-CD٣, T-Cell Accessory Membrane Molecules,Three-Dimensional Structures of TCR-Peptide- MHC Complexes).	٢	٢	---
١٢. 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).	٢	٢	---
١٣. B-Cell Generation, Activation, and Differentiation (B-Cell Maturation, B-Cell Activation and Proliferation, Regulation of the Immune Effector Response).	٢	٢	---
١٤. The Complement System (The Functions of Complement, The Complement Components, Complement Activation, Regulation of the Complement System, Biological Consequences of Complement Activation, Complement Deficiencies).	٢	٢	---

١٥. Cytokines (Properties of Cytokines, Cytokine Receptors, Cytokine Antagonists, Cytokine Secretion by TH١ and TH٢ Subsets, Cytokine-Related Diseases, Therapeutic Uses of Cytokines and Their Receptors, Cytokines in Hematopoiesis).	٢	٢	---
١٦. Cell-Mediated Effector Responses (Effector Responses, General Properties of Effector T Cells, Cytotoxic T Cells, Natural Killer Cells, Antibody-Dependent Cell-Mediated Cytotoxicity).	٢	٢	---
١٧-Hypersensitivity	٢	٢	---
١٨-Autoimmune diseases	٢	٢	---
١٩immunodeficiency	٢	٢	---
٢٠-tumor immunology-transplantation immunology	٢	٢	---
IV. Infection Control:			
١. Definitions of health care associated infections (HAIs)	٢	٢	---
٢. Risk factors for nosocomial infection transmission	٢	٢	---
٣. Epidemiological aspects of HAIs	٢	٢	---
٤. Organizational structure for infection prevention and control program The roles and responsibilities of the infection control team and committee	٢	٢	---
٥. Antimicrobial stewardship: Rational use of antimicrobials Clinical use of antibiotics for therapy and prophylaxis.	٢	٢	---
٦-Antibiotic resistance: reservoirs and how to prevent Antibiotic resistance	٢	٢	---
٧- Occupational health and safety	٢	٢	---
v.practical			
١. Biosafety in microbiological laboratories	٢٥	---	٢٥
٢. Approaches to diagnostic microbiology • Specimen collection	٢٥	----	٢٥
• Culture containers and media	٢٥	----	
• Culture of bacteria	٧٥	----	٧٥
• Identification tests	٧٥	----	٧٥
• Immunological and serological methods	٧٥	----	٧٥
• Nucleic acid based techniques	٧٥	-----	٧٥
٣. Quantification in microbiology: Methods to detect and measure bacterial growth	٥٠	----	٥٠
٤.Antimicrobial susceptibility tests, lab control of antimicrobial therapy	٢٥	---	٢٥
Total	٥٧٠	٢٤٠	٣٣٠
Credit hours	٢٧	١٦	١١

٤. Teaching and Learning Methods

٤,١- Lectures.
٤,٢- Department practical class and notes.
٤,٣- Practical lessons.

٥. Student Assessment Methods

Method of assessment	The assessed ILOs
٥,١- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
٥,٢-Written Exam: -Short essay: ٤٠٪ -structured questions: ٢٥٪ -MCQs: ٢٠٪ -Commentary, Problem solving: ١٥٪	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
٥,٣-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
٥,٤-OSPE	-Practical skills, intellectual skills

Assessment Schedule

١- Assessment ١: written examination ٤٨ week
٢- Assessment ٢: Structured Oral Exam ٤٨ week
٣-Assessment ٣… OSPE ……. ٤٨ week
٤- Assessment of attendance & absenteeism throughout the course

Weighting of Assessments

Final-term written examination	٥٠%
Structured Oral Exam	٣٠٪
OSPE	٢٠٪
Total	١٠٠٪

Formative only Assessment: simple research assignment, attendance and absenteeism

٦. List of References

٦,١- Course Notes
lectures notes **prepared by the staff member in the department**
٦,٢- Essential Books (Text Books)
Prof. Abla Elmeshad immunology, systemic bacteriology, practical books.
Lippincott`s immunology ,systemic bacteriology
Jawetz Medical Microbiology.
Roitt Essential Immunology.
Abbas Clinical Immunology
Alberts Molecular Biology
٦,٣- Recommended Books
-A coloured Atlas of Microbiology.
-Topley and Wilson, Microbiology
٦,٤- Periodicals, Web Sites, … etc
Journal of Clinical immunology.
http://mic.sgmjournals.org/
American journal of infection control
Microbiology and Immunology on line
www.sciencedirect.com

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

١. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
٢. 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.
٣. COMPUTER PROGRAM: for designing and evaluating MCQs

Course Coordinator: Dr/ Tamer Mohamed Mahmoud

Head of Department: Dr/ Abeer SH. Mohamed.

Date: ١٨/١٢/٢٠١١, Revised:١/٩/٢٠١٢, Revised:١/١٢/٢٠١٣