Course specification

University/Academy: Damanhour

Faculty/Institute: Science

Department: Zoology

1. course Data:

Course code: Zool 406	Course title: Immunology	Academic year:2010/2011 level: 4Th year/2nd term -
Specialization: Zoology and chemistry	No. of instructional units: lecture 2hrs/week practical 3hrs/week	

2. course Aim	• Comparing between the primary and secondary lymphoid and tissues. • Comparing between antigens, Immunogens, antibodies and immunoglobulin. • Describing the phenomenon of innate and adaptive immunity. • Describing different classes/subclasses of immunoglobulins, their structure and functions. • Demonstrating an understanding of the concepts of antibody specificity and its chemical basis. • Describing the role played by the innate defence mechanisms including inflammatory response, antiphagocytic mechanisms, complement and the role played by cytokines in protection against infections disease and cancer. • Demonstrating an understanding of the genetic basis of diversity of effector molecules participating in the induction of immune responses. • Describing components of the

	complement system and its function in host defence. • Performing the basic serological techniques such as those in immunohaematolgy and for the diagnosis of infectious diseases. • Describing the current state of developments in the field of cancer immunology.
3. Intended learning outcome	
a) Knowledge and understanding	A1: identify the basic knowledge about immunology. A2: explain what is the natural immunity. A3: Illustrate the complement system and various serological reactions. A4: describe the clinical immunology : allergy, autoimmunity, immunodeficiency and tumor immunology. A5: summarize he major immune cells participating in immunity. A6: show what the disease process is. A7: Recognize that the immunesystem can be mainpulted to prevent or treat disease. A8: list extensively updated immunologic laboratory tests and new methods aid in rapid clinical diagnosis. A9: mention the molecular genetic which describes the key molecular biological methods used for clinical analysis of the immune system. A10: recognize the types of vaccines and evaluation of the immune response against different vaccine.
b) Intellectual skills	B1: Assess the infective potential of environmental materials to prevent the

	spread of the infection in the community. B2: Determine and create new immunological explanation. B3: Analyze & solve immunological problems. B4: Evaluate information and immunology data. B5: Formulate and test hypotheses using appropriate experimental design and statistical analysis of data.
c) Professional skills	C1: Perform clinical laboratory methods for detection of humeral and cellular immunity. C2: Use molecular biology techniques for clinical analysis of the immune system. C3: Diagnose some diseases related to immunohaematology. C4: Practice applications of delayed hypersensitivity in diagnosis. C5: Explain experimental results and determine their strength and validity. C6: Use the scientific literature effectively.
d) General skills	D1: write reports and essays on the different scientific items in immunology. D2: Exchange ideas, principles and information by oral, written and visual means. D3: Work effectively both in a team and independently. D4: Integrate and evaluate information from a variety of sources. D5: Learn independently with open-mindedness and critical enquiry.
4. course content	• **Natural immunity, factors controlling it.** • **Antigen.**

	• **Antibodies (immunogloblins)** • **Complement system** • **Antigen – Antibody reactions (Serological tests)** • **Cell mediated immunity and cells involved in the immune response** • **Protective immunity to microbial diseases** • **Tumor immunology** • **Autoimmunity** • **Tumor immunology** • **Autoimmunity** • **Immunodeficiency disorders**
5. Teaching and learning methods	.1. Lecture using power point presentations. .2. practical sections. .3. independent reading throughout basic text books and research papers.
6. teaching and learning methods for students with special needs	----------
7. Student Assessment	
a) Procedures used:	.1. written exam. To accesses ability to remember &.understand scientific background.

	.2. poster presentation to assess skills of presenting data and discussion. .3. practical exam. To access professional and practical skills. .4. practical book for assessment of practical activities.
b) Schedule:	Assessment 1: Semester work Assessment 2: Mid-term Assessment 3: Practical final Assessment 4: Written final
c) Weighing of Assessment:	-Mid-Term Examination:15 10% Final-Term Examination:100 70% OralExamination: 0% Practical Examination: 25 12.5% Semester Work: 10 7.5% Othertypesofassessment: 0 % Total 150
8. List of Textbooks and References:	----------
a) Course Notes	----------
b) Required Books (Textbooks)	----------
c) Recommended Books	----------
d) Periodicals, web sites,…,etc	www.wekipidia.com

Course Instructor:Dr. Ali eldib

Head of Department: Prof . Karoline Kamel Abdel Aziz

Date: -----/-----/----