



Course specification

University/Academy: Damnhour

Faculty/Institute: Science

Department: Zoology

1. course Data:

Course code: Zool422	Course title: Comparative animal physiology.	Academic year:2010/2011 level: 4 th year / 2 nd term.
Specialization: Zoolgy& chemestery	No. of instructional units: lecture <input type="text" value="3hrs/week"/> practical <input type="text" value="4hrs/week"/>	

2. course Aim

a-Explaining and apply the basic methods used in physiology

b-Defining the physiological concepts

c-Explaining the principles of physiology such as: Nutrition and absorption of food, Metabolism, Respiration, Body fluids and their circulation, Excretion and osmotic & ionic regulation , types & properties of the heart, the movement in the animal kingdom, nervous & hormonal coordination and reproduction in the animal kingdom.

This course is designed also to:

D-providing practical training for students in modern laboratory techniques, methods, instrumentation and analysis

e-Developing in students the ability to apply their physiological knowledge and skills to solve



	the theoretical and practical problems in physiology
3. Intended learning outcome	
a) Knowledge and understanding	A1-identify technical methods used in physiology A2- summarize physiological instrumentation and data analysis A3- illustrate the basic mechanisms and biochemical transformation occurring in the animal and human bodies A4- describe the basic definitions commonly used in physiology A5- recognize the laws governing the response of living matter to the effect of its environment
b) Intellectual skills	B1 -Create and analyze thinking as related to the physiological aspects in animals and human B2- apply the essential facts, concepts, principles and theories relating to the physiological problems.
c) Professional skills	C1- elicit methods used in physiology C2- prepare simple practical programs to calculate some physiological parameters and different analysis techniques C3- use literature searches effectively to find information on a specific topic.



d) General skills	D1: Communicate with each other for covering both written and oral tasks. D2: Exchange skills, relating to the ability to interact with other people and to engage in team working.
4. course content	1-Food requirements of animals. 2-Metabolism: <ul style="list-style-type: none">▪ Metabolism of carbohydrates▪ Metabolism of Proteins. Metabolism of Fats 3- Respiration 4 -The blood: Properties of the human blood – Constituents – Functions – Coagulation – Agglutination & blood groups 5- Physiology of excretion 6- Physiology of the heart (types, properties, human E.C.G.) 7- Physiology of the movement (Amoeboid – Ciliary – Flagellar & muscular movement) 8-- Physiology of coordination: <ul style="list-style-type: none">▪ Nervous coordination. Hormonal coordination 9- Reproduction: Mechanisms of reproduction in animal kingdom



5. Teaching and learning methods	1- Lectures. 2- Practical. 3- Seminar. 4-Research assignment
6. teaching and learning methods for students with special needs	-----
7. Student Assessment	
a) Procedures used:	a.1- Final term examination to assess complete understanding of the class topics a.2-Mid - term examination to follow up the students understanding a.3- Class activities (reports, discussions, seminars, practical ... etc) to assess the student intellectual, professional ,practical, general and transferable skills.
b) Schedule:	Assessment 1: Practical Examination Week 14 Assessment 2: Final-Term Examination Week16



c) Weighing of Assessment:	<table><tr><td>Mid-Term Examination:</td><td>(15)</td><td>10 %</td></tr><tr><td>Final-Term Examination:</td><td>(150)</td><td>66.6 %</td></tr><tr><td>Practical Examination:</td><td>(25)</td><td>16.8 %</td></tr><tr><td>Semester Work:</td><td>(10)</td><td>6.6 %</td></tr><tr><td colspan="2" style="text-align: right;">Total</td><td>(200) 100%</td></tr></table>	Mid-Term Examination:	(15)	10 %	Final-Term Examination:	(150)	66.6 %	Practical Examination:	(25)	16.8 %	Semester Work:	(10)	6.6 %	Total		(200) 100%
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Total		(200) 100%														
8. List of Textbooks and References:	-----															
a) Course Notes	Lectures notes were prepared and handed out to the students.															
b) Required Books (Textbooks)	<p>- Wilson,J.A.,Principles of Animal physiology ,Macmillan Pub. Co. Inc., New York,1972. Library.</p> <p>-Hoar,W.S., General &Comparative physiology . (3rd ed.) , Prentic-Hall, Inc., Englewood Cliffs, New Jersey, 1983. library.</p>															
c) Recommended Books	<p>- Nielsen ,K.S., Animal physiology :adaptation & environment.(low price ed.) , Cambridge Univ.Press,1995. library.</p> <p>-Bullock , J., Boyle, J. and Wang, M.B., Physiology . (3rd ed.) , Mass Pub. Co., Egypt. (Middle East ed.), 1995. . library.</p>															



d) Periodicals, web sites,...,etc

- www. Science direct .com
-http. // www. Wikipedia.com
-http. // www .result.com

Course Instructor: Dr . Karoline Kamel Abdel Aziz

Head of Department: Prof . Karoline Kamel Abdel Aziz

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