Course specification

University/Academy: Damhbour
Faculty/Institute: Science
Department: Zoology

1. course Data:

<table>
<thead>
<tr>
<th>Course code:</th>
<th>Course title:</th>
<th>Academic year: 2010/2011</th>
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<tbody>
<tr>
<td>Zool422</td>
<td>Comparative animal physiology.</td>
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<th>Specialization:</th>
<th>No. of instructional units:</th>
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<tr>
<td>Zoology &amp; Chemestery</td>
<td>lecture 3hrs/week, practical 4hrs/week</td>
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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

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<th>3. Intended learning outcome</th>
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| **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:  
  ▪ 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:  
  ▪ 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** Week 16 |
| c) Weighing of Assessment: | Mid-Term Examination: (15) 10%  
|                           | Final-Term Examination: (150) 66.6%  
|                           | Practical Examination: (25) 16.8%  
|                           | Semester Work: (10) 6.6%  
|                           | 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)  

c) Recommended Books  
| d) Periodicals, web sites,….etc | - www. Science direct .com  
-http://www .result.com |

Course Instructor: Dr. Karoline Kamel Abdel Aziz

Head of Department: Prof. Karoline Kamel Abdel Aziz

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