Course specification

University/Academy: Damanhour
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>Zool 401</td>
<td>Comparative animal physiology.</td>
<td>level: Fourth year / first term.</td>
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Specialization: Special zoology

| No. of instructional units: | lecture 3hr | practical 4hr |

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-list some technical methods used in physiology  
A2- illustrate physiological instrumentation and data analysis  
A3- describe the basic mechanisms and biochemical transformation occurring in the animal and human bodies  
A4- mention the basic definitions commonly used in physiology  
A5- summarize the laws governing the response of living matter to the effect of its environment |
|---|---|
| b) Intellectual skills | B1- Analyze thinking as related to the physiological aspects in animals and human  
B2-Discuss and apply the essential facts, concepts, principles and theories relating to the physiological problems. |
| c) Professional skills | C1-use instruments of physiology  
C2- prepare and implement simple practical programs to calculate some physiological parameters and different analysis techniques  
C3- elicit literature searches 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 | Food requirements of animals.  
Metabolism:  
- Metabolism of carbohydrates  
- Metabolism of Proteins.  
Metabolism of Fats.  
Respiration  
The blood:  
Properties of the human blood – Constituents – Functions – Coagulation – Agglutination & blood groups  
Physiology of excretion  
Physiology of the heart (types, properties, human E.C.G.)  
Physiology of the movement (Amoeboid – Ciliary – Flagellar & muscular movement)  
Physiology of coordination:  
- Nervous coordination.  
Hormonal coordination  
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%

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<tr>
<td>total</td>
<td>(200)</td>
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<td>100%</td>
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8. List of Textbooks and References:

a) Course Notes
- Lectures notes were prepared and handed out to
<table>
<thead>
<tr>
<th><strong>the students.</strong></th>
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<tr>
<td><strong>b) Required Books (Textbooks)</strong></td>
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<tr>
<td><strong>c) Recommended Books</strong></td>
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<tr>
<td><strong>d) Periodicals, web sites,...etc</strong></td>
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| www. Science direct .com  
http://www. Wikipedia.com  
http://www. result.com |

**Course Instructor**: Prof. Karoline Kamel Abdel Aziz  
**Head of Department**: Prof. Karoline Kamel Abdel Aziz  
**Date**: -----/-----/-----