Course Specifications

Programme(s) on which the course is given: BVSc

Major or Minor element of programmes:

Department offering the programme: All departments of the faculty

Department offering the course: Animal Physiology

Academic year / Level: 2nd academic Year (first term)

Date of specification approval: 04/01/2010

A- Basic Information

Title: Animal Physiology **Code: 212**
Credit Hours: **Lecture: 4 hours per week**
Tutorial: **Practical: 4 hours per week**
Total: 8 hrs * 30 weeks= 210 hrs

B- Professional Information

1 – Overall Aims of Course

Understanding the functions of body cells and the integrated physiological mechanisms that are required to control growth, maintenance, production, reproduction and behavior of different animal species including poultry and fishes. Comparative aspects among animals are emphasized

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

graduates of veterinary medical program must acquire the following knowledge and understanding:

The Student will have a comprehensive knowledge and understanding on:

a-1- Physiology of different body systems (digestive, urinary, cardiovascular, respiratory, endocrine, reproductive, and nervous). Physiology of body fluids, mammary gland, body temperature regulation as well as organs of special sense systems are also included. With emphasis on the comparative aspects between species of each organ system.

a-2- Concept of homeostasis; integrated physiological mechanisms that operate the vital processes of animal body.

b- Intellectual Skills:

Graduates must have the ability to:

b-1- The students are able to describe and analyze:

- The different organs functions and contributes to the normal maintenance of homeostasis.

- The animal body adaptation (i.e., ability to live) to the most hostile unfavorable conditions such as extremes of temperature, atmosphere, pressure, famine, and disease.

b-2- Increase the ability of students to analyze and identify the general principles of mechanisms that operate the vital processes (growth, maintenance, production, reproduction and behavior) of animal during health.

b-3- Enhance students ability to think, imagine and solve the general physiological mechanisms that culminate (govern) the functional disturbances of animal body. With special emphasis on the physiological bases for treatment.

c- Professional and Practical Skills

Graduate must be attain the capacity to:

c-1- The students are able to practice, examine and evaluate normal functions of body.

d- General and Transferable Skills

Graduates must have the ability to :

d-1- Management of animal farming project

d-2- Use of a new technological tools for keeping animal in good health

d-3- Capability for written and communication with animal specialists.

d-4- Group working in the field of private business.

3- Contents

1st term (Lecture)

Week	Topic	Date
1st	Cell Physiology	Oct. 03
2nd	Body Fluids and Homeostasis	Oct. 10
3rd	Blood Cells and Haemostasis	Oct. 17
4th	Blood Clotting	Oct. 24
5th	Diffusion and Gas Exchange and Acid-Base Balance	Oct. 31
6th	Regulation of Breathing	Nov. 07
7th	Midterm Exam	Nov. 14
8th	Cardiac Muscle – Structure and electrical properties	Nov. 21
9th	Cardiac Muscle – Structure and electrical properties	Dec. 05
10th	Blood flow/ Pressure regulation	Dec. 12
11th	Function of the Mammalian Nephron-I	Dec. 19
12th	Function of the Mammalian Nephron-II	Dec. 26
13th	Central Nervous System and Special Senses	Jan. 02
14th	Autonomic Nervous System	Jan. 09
15th	Fish Physiology	Jan. 16

1st term (Practical)

Week	Topic	Date
1st	Blood composition	Oct. 03
2nd	Collection of blood sample	Oct. 10

3rd	Using of anticoagulants and their general properties	Oct. 17
4th	Determination of Erythrocyte Sedimentation Rate (ESR)	Oct. 24
5th	Determination of Packed Cell Volume (PCV) and Hematocrit Value (HCT)	Oct. 31
6th	Determination of Haemoglobin concentration	Nov. 07
7th	Counting of red blood cells	Nov. 14
8th	Counting of white blood cells (TLC)	Nov. 21
9th	Counting of Thrombocytes	Dec. 05
10th	Differential Leuckocytic Count (DLC)	Dec. 12
11th	Calculation of red blood cells indices	Dec. 19
12th	Blood grouping and Rh Factor	Dec. 26
13th	Determination of blood pressure and pulse rate	Jan. 02
14th	Revision	Jan. 09
15th	Practical Examination	Jan. 16

4– Teaching and Learning Methods

- Lecture and practical lessons
- Discussions
- Class activities
- Information collection

5- Student Assessment Methods

5.1… Mid-term written examination … to assess …Understanding
5.2… Practical examination ……..to assess … professional & practical skills
5.3… Final-term written examination …to assess gains of completed topics
5.4… Oral examination … ……... to assess intellectual skills

Assessment Schedule

Assessment 1. Mid-term written examination ……Week 7th
Assessment 2. Practical examination …… Week 15th
Assessment 3. Final-term written examination…… Week 16th
Assessment 4. Oral examination……. Week 16th

Weighting of Assessments

Mid-Term written examination	20%
Final-term written examination	50%
Oral examination	20%
Practical examination	10%
Total	100%

Any formative only assessments

6- List of References

6.1- Course Notes (By Staff Members)

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6.2- Essential Books (Text Books)

- Guyton A. C and Hall J. E. (1996): Textbook of Medical Physiology. 9th Ed., W.B. Saunders Co.

6.3- Recommended Books

- Swenson M. J. and Reece W. O. (1993): Duke's Physiology of Domestic Animals. 11th Ed., Ithaca, NY, Cornell Univ. Press

6.4- Periodicals and Web Sites

- Pubmed
- Journal of Physiology

7- Facilities Required for Teaching and Learning

- Small group of Students
- Data Show, Screen, new reference in library
- Laboratory devices & equipments
- Computers

Course Coordinator: Ass. Prof. Dr. Hamdy Embark

Head of Department: Prof. Dr. Abdel-Latif Shaker Seddek Awad

Date: 04/01/2009