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 (second term)

Date of specification approval: 04/01/2010

A- Basic Information

Title: Animal Physiology **Code:222**
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:

Graduate 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:

Graduate 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

Graduate 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

2nd term (Lecture)

Week	Topic	Date
1st	Nerve Physiology	Feb. 06
2nd	Muscle Physiology	Feb. 13
3rd	Structure and Function of Endocrine Glands	Feb. 20
4th	Basic Mechanism of Hormone Action	Feb. 27
5th	Control of Hormone Secretion	Mar. 06
6th	Midterm Exam	Mar. 13
7th	Structure and Function of Testes	Mar. 20
8th	Accessory Male Sex Glands and Composition of Semen	Mar. 27
9th	Oogenesis and its Hormonal Regulation	Apr. 03
10th	Oestrous Cycle and Udder Physiology	Apr. 10
11th	Structure and Function of Digestive Organs	Apr. 17
12th	Digestion, Absorption and Movements of GIT	Apr. 24
13th	Ruminant Physiology	Mai 01
14th	Metabolism and Body Temperature Regulation	Mai 08
15th	Poultry Physiology	Mai 15

2nd term (Practical)

Week	Topic	Date

1st	Nerve and muscle preparation	Feb. 06
2nd	Simple Muscle Twitch (SMT)	Feb. 13
3rd	Effect of temperature on simple muscle twitch	Feb. 20
4th	Effect of muscle fatigue on SMT	Feb. 27
5th	Effect of changing the strength of stimulus on muscle contraction	Mar. 06
6th	Effect of two successive stimuli on SMT	Mar. 13
7th	Effect of multiple successive stimuli on SMT (Genesis of Tetanus)	Mar. 20
8th	Length-tension relationship and Strength-duration relationship	Mar. 27
9th	Determination of oestrus cycle and ovulation in different animals	Apr. 03
10th	Diagnosis of pregnancy	Apr. 10
11th	Ovarian cycle in different animals	Apr. 17
12th	Evaluation of seminal sample	Apr. 24
13th	Oxygen Debt	Mai 01
14th	Revision	Mai 08
15th	Practical Examination	Mai 15

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 6th
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)

- …….....

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