

Biophysics

Benha University:

Faculty: Veterinary Medicine

Program on which the course is given: **Bachelor of Veterinary Medical Science**

Department offering the course: Department of Physics, Faculty of science

Academic year/level: 1st year

Date of specification approval: Ministerial Decree No 921, on 15/9/1987

(Then approved in this recent template by department council on 24/10/2008).

A- Basic Information

Title: Biophysics

Code: Vet 00611

Lecture: 4 h/w

Practical: 2 h/w

Total: 6 h/w

B- Professional Information

1- Overall aims of course:

Aim of course is to provide the students with the principle knowledge about the muscular action potential, electricity of the bones, basic points for uses of the X rays and their interaction with the other matters and basis of the Electrocardiograph, also this course will provide the students by the valuable information about the specific gravity of the different liquids and solid materials and melting point of different solid material that will enable them to gain the skills in the field of experimental physics and so push them for constructing and developing a simple tools depending on that basic knowledge.

2- Intended learning outcomes of course (ILOS):

a- Knowledge and understanding :

After successful completion of this course the students should be able to:

- a.1. Know the action potential in muscles.
- a.2. Know the electricity of bone and the principles of the Electrocardiograph.
- a.3. Know about X-ray and their interaction with the other matters.

b- Intellectual skills:

After successful completion of that course the students should be able to:

- b.1. Determine the specific gravity of liquid and solids .
- b.2. Determine the melting point of solids.
- b.2. Determine the power of concave mirrors .

c- Professional and practical skills :

After successful completion of that course the students should be able to:

- c.1. Construct any experiments for determination of any physical phenomena depending on the view of the physics department .
- c.2. Determine the specific gravity of different liquid and solid.

d- General and transferable skills :

After successful completion of that course the students should be able to:

- d.1. Be a successful member of biophysics.
- d.2. Illustrate a scientific study in the biophysics laboratories .
- d.3. Set the basis of the scientific biophysics terms.

3- Contents:

Topic	No. of hours	Lecture	Practical
Determination of specific gravity	20	13	7
Determination of specific heat of liquid	20	13	7
Determination of electrical chemical equivalent	20	13	7
Determination of refractive index	16	11	5
Determination of electrical chemical equivalent	14	10	4
Total	90	60	30

4- Teaching and learning methods:

- 4.1. Lectures
- 4.2. Clinical and small group sessions

5- Student assessment methods:

- 5.1. Written to assess knowledge and information.
- 5.2. Practical to assess professional and practical skills.

Assessment schedule:

Assessment 1: Practical examination	week 13
Assessment 2: Written examination	week 15

Weighing of assessments:

Practical examination	50	%
Written examination	50	%
Other types of assessment	0	%
Total	100	%

6- List of references:

6.1. Course notes: Department books

7- Facilities required for teaching and learning:

Biophysics lab.

Course Coordinators:

Prof. Dr. Hassan Omar Nafaa

Prof. Dr. Nabil Mohamed El-Nagar

Date: