

## COMPARATIVE ANATOMY (SECOND YEAR OF STUDY, III RD SEMESTER )

**No credits: 5**

### **Course status**

Compulsory

### **Course leader**

Lecturer dr Spătaru Mihaela Claudia

### **Course objectives (course and laboratory)**

1. By knowing the shape and variety of structures, devices and systems that comprise organs of vertebrate organisms and explains the principles of evolution of living matter
2. The acquisition by students of information on the role of each body in the device and the relationship between size and shape and its function in each species studied, takes an overview of each species to adapt to the needs imposed by the environment.
3. The direct involvement of students in identifying and highlighting the anatomical structures, seeks active learning through involving curiosity and knowledge acquired by linking with disciplines with complementary activities.

### **Course content (syllabus)**

#### **Course (chapters/subchapters)**

Osteology. Types of bones.

The skeleton at vertebrates: the axial skeleton (head bones, the spine vertebrae, the ribs and sternum), the appendicular skeleton (the bones of front limb and pelvic limb).

Artrology. Types of joints. The joints of head, back column and front limb and pelvic member.

Miology. The morphologic types of the muscles. The head muscles, the chest muscles, the muscles of the front limb and pelvic limb at the vertebrates.

Digestive apparatus: prediafragmatic part of it at vertebrates.

Postdiafragmatic part of digestive apparatus at vertebrates.

Respiratory apparatus at vertebrates.

Urinary apparatus at vertebrates.

Genital apparatus at vertebrates.

Circulatory system: heart. The body supply of trunk and abdominal organs. The head arteries.

The arteries of the front limb. The arteries of the pelvic member. The veins. The lymphatic system.

The nervous system. The central nervous system (the spinal cord and the brain). The peripheral nervous system.

The head nerves. The nerves of the front limb. The nerves of the pelvic member.

The sense organs. The endocrine glands.

#### **Laboratory**

The identification of the bones of the axial and appendicular skeleton at domestic bird and mammals.

The joints of head and spine at domestic bird and mammals.

The muscles of the head and trunk at mammals

The muscles of thoracic and pelvic members

Digestive apparatus: prediafragmatic part of it at vertebrates

Postdiafragmatic part of digestive apparatus at domestic bird and mammals

Respiratory apparatus at domestic bird and mammals

Urinary apparatus at bird and mammals.

Female genital apparatus at bird and domestic mammals. The annexes glands.

Male genital apparatus at bird and domestic mammals. The annexes glands.  
The heart conformation. The brachiocephalic arterial trunk. Descending aorta. The arteries of the frontlimb. The arteries of the pelvic limb.  
The veins and the lymph nodes at mammals  
The central nervous system. The spinal cord. The brain. The head nerves.  
The brachial plexus. The lombo-sacral plexus.  
The sense organs. The productions horny skin.

### Bibliography

1. Spătaru Mihaela Claudia- *Anatomia comparată a animalelor*, Ed AFFA, Iași, 2009, ISBN (13) 978-606-540-001-6
2. Coțofan V. and colab.- *Anatomia animalelor domestice, vol I, II, III*, Ed Orizonturi universitare, Timișoara, 1999, 2000, 2007
3. Feider, Z, Grosu V, Gyurko St, Pop V.- *Zoologia vertebratelor*, Ed. Didactică și pedagogică, 1967
4. Miron L, Manuela Miron- *Zoologie*, Ed Universității „Al. I. Cuza” Iasi, 2002
5. Lecture notes

### Teaching methods used

- Course: Power Point presentation;
- Laboratory: Image exposure, exposure anatomical parts by dissection

Types of activity	Evaluation *	Percent of final mark
Exam	Writing paper	60 %
Semester activity	Oral test, practical test	20 %
Laboratory	Practical test	20 %

### Contact

Lecturer dr. Spătaru Mihaela Claudia  
Faculty of Veterinary Medicine- USAMV Iași  
Mihail Sadoveanu street no. 8, Iași, 700489, Romania  
phone: 0232 407577  
fax: 0232 407577  
e-mail: [mspatarufmv@yahoo.com](mailto:mspatarufmv@yahoo.com)