

Course (TY02001): **Animal Anatomy I**

1. General information

- Term: 3
- Credits: **Total credits 3 (Lecture: 2 – Practice: 1)**
- **Self-study: 9** credits
- Credit hours for teaching and learning activities: 30 hrs
- Self-study: 135 hrs.
- Department conducting the course:
 - Department: Anatomy and Histology
 - Faculty: Veterinary Medicine
- Kind of the course:

Foundation <input type="checkbox"/>		Fundamental <input type="checkbox"/>		Option 1 <input type="checkbox"/>		Option 2 <input type="checkbox"/>	
Compulsory	Elective	Compulsory	Elective	Compulsory	Elective	Compulsory	Elective
<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Prerequisite course(s): CN02101 Zoology

2. Course objectives and expected learning outcomes

* *Course objectives:*

- Knowledge: Course provided for students with knowledge in approach to the physical structure of the body. analyze the relationship of positions and functions between organs in each organ system; describe the morphology and general structure of animal body
- Skills: Course provide students with skills in understand the main functions of the organs of each organ system in the mammalian and avian body. Identify and compare the organs of the organ systems of some major domestic animals: Pigs, Cows, Dogs, Cats
- Attitude: The course provides students with attitudes in show love for animals, meticulous, careful and self-responsible

* *Course expected learning outcomes*

Notation	Course expected learning outcomes (CLOs) After successfully completing this course, students are able to	Program performance criteria (PPC)
Knowledge		
CLO1	Identify the approach to the physical structure of the body	3.1
CLO2	Analyze the relationship of positions and functions between organs in each organ system;	3.2
CLO3	Describe the morphology and general structure	5.4
Skills		
CLO4	Understand the main functions of the organs of each organ system in the mammalian and avian body.	8.1
CLO5	Identify and compare the organs of the organ systems of some major domestic animals: Pigs, Cows, Dogs, Cats	8.2
Attitude		

CLO6	Show love for animals, meticulous, careful and self-responsible	13.2
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3. Course description

Brief description of the course: This course consist of code TY02001 - Course name: Animal Anatomy I (Total credit 3: Lecture 2 – Practice 1 – self-study 9).

Content: The course includes knowledge about the body structure of cows; Buffalo; Pig; Horse; Dog; Cat; Poultry; introduction to the skeletal system, the muscular system, the nervous system and senses, the circulatory system, the lymphatic system, the endocrine system, the digestive system, the respiratory system, the urinary system, the genitourinary system; location and morphology, general structure, distribution of nerve vessels, functions of organs and relationships between organs in the body.

Teaching method: Students listen to lectures in class in combination with self-study, self-referencing documents and exchanging with friends and teachers. Students practice under the guidance of instructors.

Assessment method: Attendance: 10%, midterm: 30%, exam 60%

4. Teaching and learning & assessment methods

CLOs	CLO1	CLO2	CLO3	CLO4	CLO5	CLO6
Teaching methods						
Lecturing	x			x	x	x
Teaching through practical work		x	x			
Assessment						
Rubric 1. Diligence (10%)	x	x	x	x	x	x
Rubric 2. Practical		x	x			
Rubric 3. Mid-term exam (30%)		x	x			
Rubric 4 Final exam (60%)	x	x	x	x	x	x

5. Student tasks

- Attendance: All students must proactive, punctual, actively answering questions.
- Preparation for the lecture: All students must take part in the mid-term exam. Students who do not take the midterm exam will not be able to take the final exam.
- Assignment: All students must complete the assignment given by lecturer
- Mid-term exam: All students must take part in the mid-term exam. Students who do not take the midterm exam will not be able to take the final exam.
- Final exam: All students must take the final exam.

6. Text books and references

* **Text Books/Lecture Notes:**

Van, T.P (1982). *Giáo trình giải phẫu gia súc*. Nhà xuất bản Nông nghiệp

*** Additional references:**

1. Van, T.P., Ty, D.T., Tu, V.P. (1992) *Giáo trình Giải phẫu cục bộ gia súc*. Nhà xuất bản Nông nghiệp

Cappello. M. (2009) *Introduction to Veterinary Anatomy and Physiology TEXTBOOK Second Edition*. Butterworth Heinemann Elsevier.

2. McCracken. T.O., Robert. A.K., Thomas. L.S. (2006). *Spurgeon's Color Atlas of Large Animal Anatomy – The Essentials*. Blackwell Publishing

7. Course outline

Week	Content	Course expected learning outcomes
1	Chapter 1: Skeleton	
	A/ Main contents: (3 hours) 1. Theories: ... (3 hours) 1.1 Introduction to the skeleton 1.2. Morphology and classification of bones. 1.3 Structure and chemical composition of bones 1.4 Origin and development of bones. 1.5 Classification of joints and joint structure. 2. Practice: ... (3 hours) 2.1. Identify and describe the bones of the head 2.2. Identify and describe trunk bones 2.3. Identify and describe the anterior extremities 2.4. Identify and describe the bones of the hind limbs 2.5. Locate and the bones that make up the joints	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (18 hours)... 1.1.All content learned in class	
...	Chapter 2: muscle system	
	A/ Main contents: (2 hours) 1. Theories: ... (2 hours) 1.1. Introduction to the musculoskeletal system 1.2 Classification of muscles 1.3 Structure and chemical composition of the body 1.4 Analysis of muscle activity in the body 1.5 Supporting structures for muscle activity	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (6 hours) 1.1.All content learned in class	
	Chapter 3: Digestive system	

	A/ Main contents: (4 hours) 1. Theories: ... (4 hours) 1.1. Introduction to the digestive system. 1.2. Sinus and salivary glands 1.3. Almost 1.4. Esophageal 1.5. Abdominal and peritoneal sinuses 1.6. Stomach 1.7. Small intestine 1.8. Colon 1.9. Liver 1.10. Capacitors 2. Practice: (2.5 hours) 2.1. Compare the morphological characteristics of the digestive organs of domestic animals 2.2. Abdominal and peritoneal sinuses	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (19.5 hours) 1.1. All content learned in class	
	Chapter 4 . Respiratory system	
	A/ Main contents: (2 hours) 1. Theories: ... (2 hours) 1.1. An outline of the respiratory system. 1.2. Sinus 1.3. Almost 1.4. Larynx 1.5. Trachea and bronchial tree 1.6. Lung 1.7. Thoracic and pleural sinuses 2. Practice: (2.5 hours) 2.1. Identify and describe the organs of the respiratory system 2.2. Compare the morphological characteristics of the respiratory organs of domestic animals 2.3. Thoracic and pleural sinuses	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (13.5 hours) 1.1. All content learned in class	
	Chapter 5 . Urinary system	

	A/ Main contents: (2 hours) 1. Theories: ... (2 hours) 1.1. An introduction to the urinary system and the anatomical relationship between the urinary system and the genitourinary system. 1.2. Kidney 1.3. Urinary tract 1.4. Bladder (urinary bladder) 1.5. Urethra 2. Practice: (1.5 hours) 2.1. Identify and describe the organs of the respiratory system	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (10.5 hours) 1.1. All content learned in class	
	Chapter 6 . Genital system	
	A/ Main contents: (5 hours) 1. Theories: ... (5 hours) 1.1. Introduction to the genitourinary system 1.2. Male sex organs 1.2.1. Complete translation 1.2.2. Complete translation 1.2.3. Complete packaging 1.2.4. Inguinal canal 1.2.5. Vasectomy 1.2.6. Urethra 1.3. Female genitalia 1.3.1. Eggs 1.3.2. Oviduct 1.3.3. Uterus 1.3.4. Vagina 1.3.5. Vulva 1.3.6. Breasts and their relationship to the female reproductive system 2. Practice: (3.5 hours) 2.1 Identify and describe the organs of the male reproductive system 2.2 Identify and describe the organs of the reproductive system of female cattle 2.3 Compare the morphological characteristics of the sexual organs of male and domestic animals 2.4 Compare morphological characteristics between animals 2.5 Pelvic cavity and the area under the abdomen, under the pelvis	CLO1, 2, 3, 4, 5, 6

	B/ Self-study contents: (25.5 hours) 1.1.All content learned in class	
	Chapter 7: Cardiovascular system	
	A/ Main contents: (3 hours) 1. Theories: ... (3 hours) 1.1. Introduction to the circulatory system 1.2. Blood 1.3. Heart, 1.4. Circuit 1.5. Fetal circulation and circulation in adult cattle. 1.6. The main vessels in the body 1.7. Veins applied in clinical Veterinary Medicine 1.8. Lymph and lymphatic vessels 1.9. Hematopoietic organs 2. Practice: (0.5 hours)	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (10.5 hours) 1.1.All content learned in class	
	Chapter 8: Endocrine glands	
	A/ Main contents: (2 hours) 1. Theories: ... (2 hours) 8.1. The concept of endocrine glands. 8.2. Features of endocrine glands and hormones 8.3. Endocrine glands: Pituitary gland, pineal gland, thyroid gland, parathyroid gland, thymus, adrenal gland. 8.4. Endocrine cell groups: Pancreatic islets, Testicular interstitial glands, Ovaries and placentas.	CLO1, 2, 3, 4, 5, 6
	B/ Self-study contents: (6 hours) 1.1.All content learned in class	
	Chapter 9: Nervous system and senses	
	A/ Main contents: (4 hours) 1. Theories: ... (4 hours) 1.1. An outline of the nervous system. 1.2. Central Nervous System: Brain, Spinal Cord	CLO1, 2, 3, 4, 5, 6

	<p>1.3. Peripheral Nervous System: Cranial nerves, spinal nerves</p> <p>1.4. Autonomic Nervous System: Sympathetic Nervous, Parasympathetic Nervous System</p> <p>1.5. Sense organs</p> <p>1.5.1. Leather and leather products</p> <p>1.5.2. Eyes, Ears</p> <p>2. Practice: (0.5 hours)</p> <p>2.1. Describe the parts of the brain and meninges</p> <p>2.2. Description of the spinal cord</p> <p>B/ Self-study contents: (13.5 hours)</p> <p>1.1.All content learned in class</p>	CLO1, 2, 3, 4, 5, 6
	<p>Chapter 10: Anatomy of Poultry</p> <p>A/ Main contents: (3 hours)</p> <p>1. Theories: ... (3 hours)</p> <p>1.1 An Introduction to Poultry Anatomy</p> <p>1.2. Anatomical features of organ systems</p> <p>1.2.1. Bone system</p> <p>1.2.2. musculoskeletal system</p> <p>1.2.3. Digestive</p> <p>1.2.4. Respiratory system</p> <p>1.2.5. Urinary system</p> <p>1.2.6. Reproductive system</p> <p>1.2.7. Cardiovascular and lymphatic system</p> <p>1.2.8. Nerve system</p> <p>1.2.9. Endocrine</p> <p>2. Practice: (1 hours)</p> <p>2.1. Organs of each organ system in the poultry body</p> <p>B/ Self-study contents: (12 hours)</p> <p>1.1.All content learned in class</p>	CLO1, 2, 3, 4, 5, 6