

## Comparative and Systematic Anatomy III

(4 CFU; 48 ore)

44 hours: 34 hrs of frontal lessons and 10 hrs of practical lessons

**Prof. Paolo Clavenzani**

Learning goal of the course: at the end of the course the student will know the macroscopic and microscopic organization of the structures belonging to the cardiovascular system, respiratory system, lymphatic system and commun integumentnervous system, digestive system, urogenital system, and endocrine system of domestic mammals.

### Lectures

Topics and skills	Subjects	Specific contents	Hours
<b>1. CARDIOVASCULAR SYSTEM (8 HOURS)</b>	<i>Generality of the course</i>	Description of the Course programm. Didactic material (power point files) provided by the teacher. Suggested books. Rules of the final examination.	0.5
	<i>Heart</i>	Conformation of the heart.	2
		Internal structure. Blood vessels of the heart.	2
		Topography. Structure of the heart.	0.5
		Conducting system. Pericardium.	0.5
	<i>Structure of the blood vessels</i>	Structure of blood vessels: arteries, capillaries and veins. Sinusoids.	1
<i>Pulmonary and systemic circulation</i>	Systemic and pulmonary circulation.	0.5	
<b>2. LYMPHATIC SYSTEM (7 HOURS)</b>	<i>General organization</i>	Organization of the lymphatic system. zzazione del sistema linfatico. Primary lymphatic organs and secondary lymphatic organs.	0.5
	<i>Lymphatic vessels system</i>	Lymphatic vessels. Structure. Lymphatic drainage.	0.5
	<i>Primary lymphatic organs</i>	Bone marrow, thymus.	1.5
	<i>Secondary lymphatic organs</i>	Lymph nodes, spleen.	3
	<i>Topography of lympho-centre</i>	Palpable lymph nodes.	0.5

<b>3. RESPIRATORY SYSTEM (11 HOURS)</b>	<i>Respiratory passages</i>	Nose: nostrils, nasal vestibules, nasal cavities e paranasal sinuses.	2.5
	<i>Respiratory passages</i>	Larynx. Trachea and bronchi.	3.5
	<i>Lungs</i>	Lungs: surfaces, borders, fissures, lobes. Bronchial tree, bronchioles and pulmonary alveoli. Topography.	4
	<i>Thoracic wall and pleurae</i>	Thoracic wall, pleurae and mediastinum.	0.5
<b>4. COMMUN INTEGUMENT (4 HOURS)</b>	<i>Skin and cutaneous organs</i>	Skin, skin glands, hairs, hoof. Mammary gland.	3.5
<b>5. AVIAN ANATOMY (8 HOURS)</b>	<i>Generality of birds and musculoskeletal system</i>	Domestic Birds. Skull. Axial skeleton. Appendicular skeleton.	1
	<i>Circulatory system</i>	Heart. Lymphatic structures.	0.5
	<i>Digestive apparatus</i>	Beak and oropharynx. Esophagus and stomach. Intestine: duodenum, jejunum, ileum, ceca and colon. Cloaca. Liver and pancreas.	2
	<i>Respiratory system</i>	Nasal cavity, larynx, trachea and syrinx. Lungs and air sacs.	2
	<i>Urogenital apparatus</i>	Kidney and ureter. Testis, deferent and phallus. Ovary and oviduct.	1
	<i>Integument</i>	Skin. Uropygial gland. Feathers	0.5

The Course includes 10 hours of practical activity for each student that will be held in the dissecting room. Students will be divided in 4 shifts of about 23/25 unit each. During practical activity students can perform dissections on some organs such as heart, spleen, larynx, trachea, bronchus and lungs. Specially prepared heads will be available to point out paranasal sinuses. Preparations of horse hoofs will be showed to the students.

Exercise microscopic anatomy will be held in Microscopic Room (40 microscopes). Students can study microscopic anatomy of the respiratory and circulatory system, of the lymphoid organs and of the integumentary system.