

Level: Bachelor				
Course title: BASIC ANIMAL PHYSIOLOGY, OE015A				
Status: obligatory				
ECTS: 6				
Requirements: none				
Learning objectives To enable students to understand fundamental principles in survival of organism in changeable environmental conditions.				
Learning outcomes Students will be able to understand and describe the basic principles in functioning of animals as integrated systems on the each level of functional organization.				
Syllabus <i>Theoretical instruction</i> Physiology of membrane transport. Action potential. Basic principles of the function of skeletal and cardiac muscle. Synaptic transmission. Basic principles in perception and receptors. Reflex arc and reflexes. Function of the autonomic nervous system. Central regulation of visceral function. Comparative overview and function of circulatory, respiratory, gastrointestinal and excretory system. Basic principles in physiology of endocrine system. <i>Practical instruction</i> Membrane transports. Experiments on nerve-muscle frog preparation and frog heart preparation <i>in situ</i> . Computer simulations of functions of nerve and muscle cell. Hemolymph and heart rhythm in snail. Determination of number of cellular elements in peripheral blood of animals. Blood differential test. Physiology of respiratory, circulatory and digestive system. Qualitative and quantitative analysis of urea concentration in serum. Computer simulations of filtration and osmoregulation. Determination of phases of estrous cycle in female rats.				
Weekly teaching load				Other:
Lectures: 3	Exercises: 3	Other forms of teaching:	Student research:	