

General Information			
Course name and code	Animal and Human Ecophysiology ÚBEV/EFZ1/03	ECTS Credits	6
		Semester	1st (Winter) Master & Doctoral Degree
Aims			
<p>The aim of lectures is to provide students with knowledge of adaptations to environmental factors and how do animals and humans cope with extreme environmental effects.</p>			
Contents			
<p>Environmental factors, reaction, adaptation, deformation. Biological rhythms. Stress reaction - general adaptation syndrom. Physiology and pathology of adaptation mechanisms - fever, pain, inflammation, apoptosis, necrosis. Aging. Regulation of food intake. Food adaptations, fasting, starvation, overfeeding. Thermoregulation. Hibernation, estivation, diapause. Adaptations to hypobaria and hyperbaria. Adaptations to hypergravity and microgravity. Electromagnetic fields. Biotransformation. Xenobiotics in air, water and soil. Drugs of abuse. Carcinogenesis, oncogenes, tumor suppressor genes. Cancer prevention. Prions.</p>			
Assessment Methods and Criteria			
<p>Thesis elaboration, written test.</p> <p>Grading Scale (in %): A ... 100 - 91%, B ... 90 - 81%, C ... 80 - 71%, D ... 70 - 61%, E ... 60 - 51%, Fx ... < 51%</p> <p>Grading System: The University recognises the following six degrees for the evaluation of the study results:</p> <ul style="list-style-type: none"> a) A – excellent (excellent results) (numerical value 1) b) B – very good (above average results) (1.5) c) C – good (average results) (2) d) D – satisfactory (acceptable results) (2.5) e) E – sufficient (results meet the minimum criteria) (3) f) FX – failed (requires further work) (4) 			
Bibliography			
<p>Piantadosi C.A.: The Biology of Human Survival. Oxford University Press, 2003 Ashcroft F.: Life at the Extremes. University of California Press, 2000 Wilmer P and co.: Environmental Physiology of Animals. Blackwell Publishing Inc., 2004</p>			