

Specification for book of subjects

Study programme		INTEGRATED BASIC AND MASTER ACADEMIC STUDIES	
Selected field (module)			
Type and level of studies		INTEGRATED STUDIES	
Title of subject		Zoology	
Teacher (for lectures)		Prof. Dr. Zoran Stanimirović, Prof. Dr. Ninoslav Djelić, Assoc. Prof. Dr. Jevrosima Stevanović	
Teacher/associate (practical instr.)		Assist. Uroš Glavinić, DVM	
Teacher/associate (за ДОН)		-	
ESPB points	4.0	Subject status (compulsory/optional)	Compulsory
Requirement	Entered first semester		
The aim of the subject	The subject Zoology aims to prepare students to attend preclinical and clinical subjects at the Faculty of veterinary medicine through study about theoretical and practical points in animal biology.		
Outcome of the subject	A student should learn basic terms in comparative zoology, binominal nomenclature, taxonomy and zoecology, evolution and basic principles of genetics. A student should understand: basic mechanisms of heredity and evolution, basic mechanisms of gene segregation and interection during the processes of animal reproduction, basic mechanisms of sex determination, basic mechanisms of repair and recombination of genetic material in prokaryots and eukaryots and elements of ecology . A student should learn to use an optical microscope, to make native microscopic preparations, to learn how to isolate animal chromosomes, how to determine taxonomic status, morphological and ecological specificities of all domesticated and some wild animal species.		
Subject content			
Theoretical instruction	Zoology. Basic principles of systematics and taxonomy and five kingdoms of living forms. (2). Pseudocoelomata, Coelomata – Mollusca, Annelida и Arthropoda (2). Chordata (4). Basic principles of ecology (4). Basic principles of evolution (2). Principles of genetics. The application of genetics in veterinary medicine, Mendelian genetics, genes, genotype and phenotype, mechanisms of inheritance and types of gene interactions (2). Biological sense of the DNA origin, chromosomes of eukaryotes, central dogma of molecular biology (2). Регулација активности гена прокариота и еукариота (2). Genetic basis of cell division, extrachromosomal inheritance (2). Linkage and recombinations, genetics of sex determination (2). Gene mutations, genotoxicity, chromosome aberrations, DNA repair (4). Quantitative genetics, genetics of populations, recombinant DNA technology and genomics (2).		
Practical instruction (practical work, ДОН, exploring task)	Microscope and microscopy (2). Morphology and determination of some protozoans from ruminant rumen (2). Morphology and taxonomical keys for Cnidaria, Plathelminthes, Pseudocoelomata, Mollusca (2). Morphology and taxonomical keys for Annelida, Arthropoda (2). Morphology and taxonomy of Pisces, Amphibia, Reptilia, Aves и Mammalia (12). Genetic basis of cell division (2). Mendelian genetics (4). Cytogenetics (4).		
Литература			
1	Stevanović J, Stanimirović Z, Djelić N: Zoology, Faculty of veterinary medicine, University of Belgrade, CiD, Belgrade, 2013.		
2	Djelić N, Stanimirović Z: Principles of genetics, Faculty of veterinary medicine, University of Belgrade, Elit-Medica, Belgrade, 2004.		
3	Stanimirović Z., Djelić N: Manual in zoology. Faculty of veterinary medicine, University of Belgrade, Belgrade, 2006.		
4	Radović I, Petrov B: Life diversity I – structure and function, Faculty of Biology, University of Belgrade, Belgrade, 1999.		
5	Stanimirović Z, Soldatović B, Vučinić M: The bee biology - the honeybee. Станимировић З, Солдатовић Б, Вучинић М: Биологија пчела. Медоносна пчела. Faculty of Biology, University of Belgrade, Belgrade, Medicinska knjiga-Medicinske komunikacije, Belgrade, 2000.		
6	Kulić M, Stanimirović Z, Djelić N, Novaković M: Human genetics. Faculty of medicine, Foča, Eastern Sarajevo University, 2010.		
Number of active teaching during a week/trimester/year			
Lectures	Practical instruction	ДОН	Student research work
30	30	-	
Methods of teaching performance	Theoretical instruction is interactive with application of audio-visual methods (PowerPoint presentations, films). Demonstrations and practical instruction using a microscope. Each student uses a microscope in order to explore and draw microscopic preparations. Laboratory instruction in cytogenetics. Direct contact with animals in ZOO.		
Final marks (a total number of points in 100)			
Pre-exam activities	points	Final exam	points
Activities during lectures	10	Written exam	20
Practical instruction	30	Oral exam	30
Test	10		
Seminars			

