CONTENT

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/FYZ/04	**Course name:** Animal and Human Physiology

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: Per study period: 15s
Course method: distance, present

Number of ECTS credits: 6

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
oral examination

Learning outcomes:
To extend the knowledge from the basic subject of Animal physiology with respect to the topic of the dissertation.

Brief outline of the course:
1. Basic principles in Animal Physiology.
2. The goal and functioning of the integrating systems of the body. Control and regulating processes.
3. Homeostatic mechanisms for maintenance of the stability of the inner environment. The aim of physiological adaptations.
4. Transport processes in the human body.
5. Principles of the energetic metabolism. Anaerobic and aerobic processes in the metabolism of nutrients.
6. Adaptation to low and high environmental temperatures.
7. Control of movement - motoric bases of behaviour.
8. Mechanisms of salt and water housholding. Adaptations to dry environment.

Recommended literature:
Hill, Wyse, Anderson : Animal Physiology, Sinauer Assoc., 2008

Course language:
english

Notes:

Course assessment
Total number of assessed students: 64

N	P
0.0	100.0

Provides: prof. RNDr. Beňadik Šmajda, CSc.

Date of last modification: 25.03.2022

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ BGEE/11	**Course name:** Biogeography

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 1 / 2 **Per study period:** 14 / 28
Course method: distance, present

Number of ECTS credits: 6

Recommended semester/trimester of the course: 1., 3.

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination.

Learning outcomes:
Broadened contemporary knowledge of the principles of distribution of living biota on Earth with regard to its history and evolution of global ecosystems. To apply modern methods of ecology, molecular biology and genetics to the study of the recent distribution of organisms

Brief outline of the course:
The subject concentrates on environmental and ecological perspectives to show how they have impacted the evolution, distribution and diversity of species. Updated to reflect current research, it involves short introduction to the discipline, then describes the environmental setting and basic biogeographic patterns, earth history and fundamental biogeographic processes, the evolutionary history of lineage and biotas, ecological biogeography, conservation biogeography, and the future of the discipline.

Recommended literature:
Darlington P.J., 1998: Zoogeography: The geographical distribution of animals. Krieger, USA, p. 1-690
Lomolino M.V., Brown J.H., Riddle B. R., 2005: Biogeography. Sinauer Associates, 1-845

Course language:
English language

Notes:

Course assessment
Total number of assessed students: 30

N	P
0.0	100.0

Provides: prof. RNDr. Martin Bačkor, DrSc., prof. RNDr. Ľubomír Kováč, CSc.

Date of last modification: 10.12.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ BSP/04	**Course name:** Biospeleology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 1 / 1 **Per study period:** 14 / 14
Course method: distance, present

Number of ECTS credits: 4

Recommended semester/trimester of the course: 2., 4.

Course level: II., III.

Prerequisities:

Conditions for course completion:
Active participation in seminars and field trips, preparation of oral presentation to a selected topic, completion of semestral written examination, final oral examination.

Learning outcomes:
The main goal of the subject is to get basic knowledge on the diversity of the cave biota, relationships and adaptations to the specific environment, its role in the cave system and protection of the cave biota.

Brief outline of the course:
The subject covers morphology and systematics of the cave fauna and microflora, their adaptations to this specific habitat type, geographic distribution, functioning of the cave system and interactions between its components, human influence and protection of the cave biota.

Recommended literature:
Culver D. C., 1982: Cave life – evolution and ecology. Harvard University Press, Cambridge, Massachusetts and London
Culver D.C., White W.B., 2005: Encyclopedia of caves. Elsevier, 1-654
Vandel A., 1965: Biospeleology - the biology of cavernicolous animals. Pergamon Press, Oxford
Wilkens H., Culver D.C., Humphreys W.F., 2000: Subterranean Ecosystems. Ecosystems of the World, vol. 30. Elsevier, 1-791

Course language:

Notes:

Course assessment
Total number of assessed students: 76

A	B	C	D	E	FX	N	P
96.05	0.0	2.63	1.32	0.0	0.0	0.0	0.0

Provides: prof. RNDr. Ľubomír Kováč, CSc., RNDr. Andrea Parimuchová, PhD.

Date of last modification: 10.12.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ MET/04	**Course name:** Cell Metabolism

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28 / 0s
Course method: distance, present

Number of ECTS credits: 5

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination

Learning outcomes:
Broadening of the basic knowledge of metabolic processes for homeostasis maintenance in animal and human organism

Brief outline of the course:
Carbohydrates – structure, biological significance of mono-, di-, polysaccharides and its derivatives, pathways of carbohydrate synthesis and degradation, glycaemia regulation, clinical aspects of carbohydrate metabolism. Lipids – categories, metabolism, lipogenesis, lipolysis, the metabolic roles of the liver and adipose tissue. Ketogenesis. Regulation of carbohydrate and lipid metabolism. Plasma lipoprotein metabolism, hyper- and hypolipoproteinemias. Cholesterol metabolism, biochemical and clinical aspects of atherogenesis and atherosclerosis. Arachidonic acid – biological significance, formation and functions of eicosanoids, clinical correlations. Reactive oxygen and nitrogen species, oxidative metabolism, antioxidative systems. Metabolic pathways of protein degradation and amino acid transformation, special products of amino acid metabolism. Nitrogen metabolism, urea biosynthesis. Metabolism of porphyrins, purines and pyrimidines. Water metabolism and its disturbances. Metabolism of solutes. Mechanisms of metabolic processes regulation.

Recommended literature:
1. Devlin T.M.: Textbook of Biochemistry with Clinical Correlations. Wiley-Liss 2006
2. Bhagavan N.V., Chung-Eun Ha: Essentials of Medical Biochemistry. Elsevier 2011
3. Newsholme E., Leech T.: Functional Biochemistry in Health and Disease. Wiley-Blackwell 2010

Course language:

Notes:

Course assessment Total number of assessed students: 37	
N	P
0.0	100.0
Provides: doc. RNDr. Monika Kassayová, CSc.	
Date of last modification: 16.09.2021	
Approved: prof. RNDr. Beňadik Šmajda, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ CRO1/03	**Course name:** Chronophysiology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 1 **Per study period:** 28 / 14
Course method: distance, present

Number of ECTS credits: 5

Recommended semester/trimester of the course: 1.

Course level: II., III.

Prerequisities:

Conditions for course completion:
Active participation on practicals.
Passing of the final oral examination.

Learning outcomes:
To outline the problematics of the time organization of biological processes and their significance in evolution of living organisms.
To understand the mechanisms, ensuring the adaptation to regular changes in their environment with various periodicity, as well as of the common action of external and internal factors in control of the biological rhythms..

Brief outline of the course:
1. Time structure of the physiological variables in animals.
2. Overview of the history of chronobiology.
3. Basic notions and division of biological rhythms.
4. Genetic basis and molecular mechanisms of the biological rhythms in animals.
5. Endogenous character of the biological rhythms. Localization of the biological clock.
6. Synchronsation of rhythms. Multioscillatory system of the body.
7. Model animals in study of biological rhythms.
8. Ultradian rhythms.
9. Circaannual (seasonal) rhythms.
10. Application of chronobiological principles in medicine.
11. Disturbations of the biological rhythms. The jet-lag syndrome.
12. Biological rhythms in shift-work.
13. The significance of biological rhythms in the evolution of living organisms.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 95

A	B	C	D	E	FX	N	P
22.11	20.0	27.37	11.58	4.21	0.0	0.0	14.74

Provides: prof. RNDr. Beňadik Šmajda, CSc., RNDr. Natália Pipová, PhD.

Date of last modification: 21.09.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ PFYZ/15	**Course name:** Comparative animal physiology

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course: 1.

Course level: II., III.

Prerequisities:

Conditions for course completion:
Working out the given themes of the report.
Passing the final oral examination.

Learning outcomes:
The students receive an overview on the significance of physiological adaptational mechanisms to the various life conditions on the individual levels of the phylogenesis.

Brief outline of the course:
1. Phylogeny of food acquisition, processing and utilization in animals.
2. Energy metabolism (factors influencing the metabolic rate; physiology of physical work; principles of aerobic performance in various species).
3. Thermal housekeeping (poikilothermic and homoiothermic strategies.
4. Life in cool environment).
5. The phylogenic development of the nervous system.
6. Sensory abilities of the animals.
7. Evolution of the brain. Endocrinal and neuroendocrinal regulation of body functions in evertebrates and vertebrates.
8. Reproductive systems of the animals.
9. Navigation in animals. Motoric basics of animal behaviour.
10. The mechanisms of the exchange of respiratory gases in a phylogenetic view.
11. Comparison of circulatory systems in animals.
12. Water- and mineral housekeeping in terrestrial and aquatic animals.
13. Excretory systems of the animals.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 21

A	B	C	D	E	FX	N	P
42.86	23.81	0.0	9.52	4.76	0.0	0.0	19.05

Provides: prof. RNDr. Beňadik Šmajda, CSc.

Date of last modification: 21.09.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ EET1/03	**Course name:** Ecological ethology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 2 **Per study period:** 28 / 28
Course method: distance, present

Number of ECTS credits: 6

Recommended semester/trimester of the course:

Course level: II., III.

Prerequisities:

Conditions for course completion:
Field excursion
Oral examination.

Learning outcomes:
To analyze and comprehend to priciples of behavioral strategies in a given ecosystem from the point of view of sociobiology

Brief outline of the course:
The topic of sociobiology and its relations to other disciplines. The evolution of social behavior in animals and in man. Strategies of social interactions and formation of groups in relation to the ecosystem. The choice of appropriate social arrangement, sexual partner, reproductional and parental strategy. Competition among indiviuals and sexes.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 209

A	B	C	D	E	FX	N	P
88.04	3.83	5.26	0.48	0.0	0.0	0.0	2.39

Provides: RNDr. Igor Majláth, PhD.

Date of last modification: 16.05.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ EKC1/00	**Course name:** Ecology of mammals

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 1 / 1 **Per study period:** 14 / 14
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course:

Course level: II., III.

Prerequisities:

Conditions for course completion:

Learning outcomes:
To understand a) ekological position of mammal groups in ecosystems and their importance in ecological networks; b) anthropogenic impacts on mammals and their coenoses; c) population ecology of some mammal groups

Brief outline of the course:
1. Factors of environment. Temperature. Water. Snow. Light. Adaptations. Hypothermy. Hibernation, aestivation, letargy. 2. Reseources. Food. Food strategies and specialistaions. 3. Habitat and nika. Interactions. 4. Komensalism. Mutualism. Kooperation. Competion. Predator and prey. 5. Mammals and plants. Food webs. 6. Teritoriality. Home range. Lek. Metapopulations. 7. Reproduction. Mating systems. Oestrus. r- and K- strategy. Monogamy, polygamy. 8. Dispersion. Migration. Habitat selection. Individual. Population. Natality, mortality. Kohorts. Population dynamics and cycles. Gradations. 9. Mammal diversity. Island biogeografy. Macroecology. Gradients. Long-term studies. 10. Habitat fragmentations. Synanthropy. 11. Conservation of mammals. Wind energy. Mammal introductions. Repatriations, reintroductions. Expansions. 12. Global climate changes and mammals. Protected areas. 13. Vulneralble species. Minimal viable population.

Recommended literature:
Feldhamer G., Drickamer L., Vessey SH., Merritt JF., 2000. Mammalogy: Adaptation, Diversity and Ecology. McGraw Hill Hardback, 563 pp.
Vlasák P., 1986. Ekologie cicavcu. Academia, Praha, 292 pp.

Course language:

Notes:

Course assessment
Total number of assessed students: 258

A	B	C	D	E	FX	N	P
65.12	17.05	11.63	2.33	2.33	0.0	0.0	1.55

Provides: doc. RNDr. Marcel Uhrin, PhD.
Date of last modification: 20.09.2021
Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/END/04	**Course name:** Endocrinology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 1 **Per study period:** 14 / 0s
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination. Application of knowledge from endocrinology to the solved problem of the doctoral student's thesis.

Learning outcomes:
To broaden the student´s knowledge of endocrine organ and tissue function at all levels of the animal and human organism

Brief outline of the course:
1. Chemical structure of hormones, general principles of hormone action.
2. Hormone biosynthesis, secretion, transport and degradation.
3. Hormone-receptor interaction, receptor types, transmission of hormonal signal into the cell.
4. Neuroendocrinology, hypothalamic-pituitary system.
5. Hormones of thyroid gland, regulation of thyroid secretion.
6. Parathyroid glands, hormonal regulation of calcium and phosphorus homeostasis.
7., 8. Hormones of adrenal glands – adrenal cortex and medulla.
9. Pancreatic islets, regulation of metabolic processes.
10. Hormones and regulatory peptides of gastrointestinal tract.
11. Neuroendocrine regulation of food intake and body mass, endocrine activity of adipose tissue.
12. Hormones of male and female reproduction, hormonal regulation of pregnancy and lactation.
13. Pineal gland. Principles of hormonal integration.

Recommended literature:
1. Goodman H.M.: Basic Medical Endocrinology. Academic Press 2009
2. Jameson J.L.: Harrison´s Endocrinology. McGraw-Hill Companies Inc., 2010
3. Gardner D.G., Shoback D.: Greenspan´s Basic and Clinical Endocrinology. McGraw-Hill Companies Inc., 2011

Course language:

Notes:

Course assessment Total number of assessed students: 13	
N	P
0.0	100.0
Provides: doc. RNDr. Monika Kassayová, CSc.	
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Beňadik Šmajda, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ EFYZ/04	**Course name:** Environmental physiology

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: Per study period: 15s
Course method: distance, present

Number of ECTS credits: 4

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
oral exam

Learning outcomes:
The aim of this subject is to explain the influence of environmental factors and mechanisms of adaptations in animals and humans.

Brief outline of the course:
1. Definition and classification of adaptations.
2. Regulation of energy homeostasis.
3. Molecular basis of food intake regulation.
4. Energy deficit, factors influencing survival in fasting.
5. Increased energy intake and its consequences.
6. High temperature tolerance, limits of survival.
7. Adaptations to low temperature.
8. Survival in hypobaric environment.
9. Hyperbaria and its effects.
10. Effects of hypergravity and microgravity.
11. Electromagnetic radiation, the significance and effects on living organisms.
12. Xenobiotics and their metabolism.
13. The effects of environmental xenobiotics on organisms.

Recommended literature:
Piantadosi C.A.: The Biology of Human Survival. Oxford University Press, 2003
Ashcroft F.: Life at the Extremes. University of California Press, 2000
Kamler K.: Surviving the Extremes. Penguin Books, 2004

Course language:

Notes:

Course assessment Total number of assessed students: 7	
N	P
0.0	100.0
Provides:	
Date of last modification: 14.07.2022	
Approved: prof. RNDr. Beňadik Šmajda, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ EXON/04	**Course name:** Experimental oncology
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 15 **Per study period:** 210 **Course method:** distance, present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion: oral exam	
Learning outcomes: To clarify the general mechanisms and principles of neoplastic transformation and possibilities of its modulation in experimental animals.	
Brief outline of the course: 1. Carcinogenesis, molecular basis of carcinogenesis. 2. Oncogens, tumour supressor genes. 3. Cell cycle regulation. 4. Types of cell death. 5. Tumour microenvironment. 6. Cancer cell metabolism. 7. Tumour classification. 8. Classification of carcinogens. 9. In vitro and in vivo models of carcinogenesis. 10. Possibilities of cancer prevention, risk factors. 11. Mechanisms of cancer chemoprevention. 12. Natural and synthetic chemopreventive substances. 13. Clinical chemoprevention trials.	
Recommended literature: Scientific journal articles. Weinberg R.A, The biology of cancer. Garland Science, Taylor and Francis Group, LLC, 2007.	
Course language:	
Notes:	

Course assessment Total number of assessed students: 16	
N	P
0.0	100.0
Provides: doc. RNDr. Bianka Bojková, PhD.	
Date of last modification: 14.07.2022	
Approved: prof. RNDr. Beňadik Šmajda, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ IMU/04	**Course name:** Immunology
Course type, scope and the method: **Course type:** Practice **Recommended course-load (hours):** **Per week: Per study period:** 20s **Course method:** distance, present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course: 2., 4.	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 38

N	P
0.0	100.0

Provides: RNDr. Vlasta Demečková, PhD.
Date of last modification: 23.11.2021
Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ NAT/10	**Course name:** Neuroanatomy

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 0 **Per study period:** 28 / 0
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
1. compulsory participation on Anatomy lectures, max. 3 absences per semester
2. oral exam during summer exam period. Exam grade depends on the gained knowledge on the structure, functions and spatial organization of individual parts of nervous system.

Learning outcomes:
After successful completion of the lectures, student masters the knowledge on anatomy and organization of central and peripheral nervous system. Student understands the particular functions of nervous system in homeostasis, sensory perception, motor functions, as well as in processing of signal at various levels of nervous system. Successful completion of the lectures prepare students for further study of Neurophysiology, Neuropsychology, etc.

Brief outline of the course:
1. introduction to neuroanatomy, basic principles of functional neuroanatomy, classification of the nervous system,dividing of the Nervous System (CNS, PNS, autonomous NS, somatic NS),
2. the spinal cord and nervous tracts
3. the brainstem: medulla oblongata, pons, mesencephalon
4. peripheral nervous system: spinal and cranial nerves
5. the cerebellum
6. the diencephalon - topography, organization, basal ganglia
7. the telencephalon - cerebral cortex (paleopalium, archipallium), limbic system
8. the telencephalon - neocortex: cortical centers
9. the telencephalon - neocortex: associative cortex
10. the telencephalon, cerebral cortex (paleopallium, archipallium, neopallium) and basal ganglia
11. ventricular system of the brain, meninges and blood supply,
12. autonomic nervous system: symphatetic and parasymphathetic
13. sensory organs

Recommended literature:
Lovásová, K., Kluchová, D., Boleková, A.:Neuroanatómia pre psychológov, Košice, Equilibria, UPJŠ 2015
Miklošová M.: Anatómia, Košice, Equilibria, UPJŠ 2011

Druga R., Grim M., Dubový P.: Anatomie centrálního nervového systému Galén Karolinum, 2011
Ševc, J., Mochnacký, F.: Anatomické termíny pre jednoodborové a medziodborové štúdium biológie, UPJŠ, e-book (https://unibook.upjs.sk/sk), 2020

Course language:

Notes:

Course assessment
Total number of assessed students: 32

A	B	C	D	E	FX	N	P
18.75	9.38	6.25	0.0	0.0	3.13	0.0	62.5

Provides: doc. RNDr. Juraj Ševc, PhD.

Date of last modification: 07.09.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ NEU/04	**Course name:** Neuronal basis of behavior.

Course type, scope and the method:
Course type: Lecture
Recommended course-load (hours):
Per week: Per study period: 15s
Course method: distance, present

Number of ECTS credits: 6

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination.

Learning outcomes:
This subject is aimed to provide knowledge on the correlation between processes in

Brief outline of the course:
1. Neuronal mechanisms of learning and memory.
2. Neurochemistry of emotions.
3.The role of the left and right hemispheres in control of various types of behaviour.
4. Neurodegenerative processes in the CNS.
5. Biological basis of patological deviations of behaviour in humans.
6. Neurophysiology of addiction.
7. Neuronal control of eating behaviour.
8. Neurobiology of sleep.
9. Neuaral control of sexual behaviour.
10. Control of circadian rhythms by CNS.
11. Brains centers of speach and its disorders.
12. Biological origin of mental disorders.
13. Genetic bases of behaviour.

Recommended literature:
A.Wickens: Foundations of Biopsychology. Pearson/Prentice Hall, Harlow,London,...,2005.
T.J.Carew: Behavioral Neurobiology. Sinauer Assoc.,Sunderland (USA), 2000.
R.P.Kesner, J.L.Martinez: Neurobiology of learning and memory. Academic Press,Elsevier, Amsterdam,....,2007.

Course language:

Notes:

Course assessment Total number of assessed students: 18	
N	P
0.0	100.0
Provides: prof. RNDr. Beňadik Šmajda, CSc.	
Date of last modification: 21.10.2021	
Approved: prof. RNDr. Beňadik Šmajda, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ PAR2/03	**Course name:** Parasitology II

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 1 / 1 **Per study period:** 14 / 14
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course: 2.

Course level: II., III.

Prerequisities:

Conditions for course completion:
active participation in practical exercises
presentation of seminar work
continuous written examinations
oral examination

Learning outcomes:
After completing the course Parasitology II. students will demonstrate
- knowledge of diagnostic methods commonly used in parasitology
- practical use of methods commonly used in parasitology
- evaluate the method of detection and identification on the basis of knowledge of parasite life cycles

Brief outline of the course:
The course builds on the knowledge acquired in the Parasitology I. course, expands them and includes vectors transmitted organisms. It focuses on mastering the methods used in parasitology.
Syllabus:
Week 1: Parasitic adaptations
Week 2: Parasite-host interactions
Week 3: Behavioral strategies of parasites
Week 4: Effect of the parasite on host behavior
Week 5: Vector-borne viruses
Week 6: Vector-borne bacteria
Week 7: Vector-borne parasites
Week 8: Laboratory diagnostic methods
Week 9: Flotation and serological methods
Week 10: Molecular detection and identification
Week 11: Methods of capturing vertebrates for parasitological purposes
Week 12: Methods of capturing invertebrates for parasitological purposes
Week 13: Parasitological autopsy

Recommended literature:
1. Roberts, Janovy Jr. Nadler,Foundations of Parasitology, 9th edition, 2012 McGraw-Hill Education, 701pp.

2. Loker, Parasitology: A Conceptual Approach, 2015, Garland Science, 560 pp.

Course language:
slovak, english

Notes:

Course assessment
Total number of assessed students: 63

A	B	C	D	E	FX	N	P
76.19	9.52	6.35	1.59	1.59	1.59	0.0	3.17

Provides: RNDr. Viktória Majláthová, PhD., RNDr. Mikuláš Oros, PhD.

Date of last modification: 17.09.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ VKH1/03	**Course name:** Selected topics in herpetology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 1 **Per study period:** 28 / 14
Course method: distance, present

Number of ECTS credits: 4

Recommended semester/trimester of the course:

Course level: II., III.

Prerequisities:

Conditions for course completion:
Field excursion
Oral examination.

Learning outcomes:
To broaden the knowledge of students on evolution, taxonomy, morphology, ecology and ecology of reptiles aquired before in the subject Zoology.

Brief outline of the course:
Systematical overview of amphibia and reptilia with a classification on species level. Phylogenetical development of amphibia and reptilia. Charcteristics of morphological and ecophysiological adaptations. Adaptaions on the significant abiotic and biotic factors (food, tepmerature,substrate, humidity, etc.). Selected aspects of population dynamics of some groups. Behavioral manifestations of amphibia and reptilia from a comparative aspect.

Recommended literature:
1. BARUŠ V. a kol.: Reptiles-Reptilia (Fauna of the ČSFR),Prague, 1992 (in Czech)
2. BARUŠ V. a kol.: Amphibia (Fauna of the ČSFR). Prague,1992. (in Czech)
3. OLIVA O., HRABĚ S., LÁC J. : Vertebrates of Slovakia I. Bratislava, 1968 (in Slovak
4. ROČEK Z.: Studies in Herpetology. Praha, 1986.
5. ZWACH I. : Our species of amphibia and reptilia on the photograph. Prague,1990.
6. DIESENER G., REICHHOLF J.: Amphibia and reptilia. Bratislava,1997

Course language:

Notes:

Course assessment
Total number of assessed students: 155

A	B	C	D	E	FX	N	P
90.97	4.52	2.58	0.0	0.0	0.0	0.0	1.94

Provides: RNDr. Igor Majláth, PhD., RNDr. Natália Pipová, PhD.

Date of last modification: 16.05.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/UK/17	**Course name:** Urbánna ekológia

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 2 / 1 **Per study period:** 28 / 14
Course method: distance, present

Number of ECTS credits: 3

Recommended semester/trimester of the course: 2., 4.

Course level: II., III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 27

A	B	C	D	E	FX	N	P
100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Provides: doc. RNDr. Marcel Uhrin, PhD.

Date of last modification: 20.09.2021

Approved: prof. RNDr. Beňadik Šmajda, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ VMESd/17	**Course name:** Vývinové a molekulárne mechanizmy v evolúcii stavovcov
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week:** 2 **Per study period:** 28 **Course method:** distance, present	
Number of ECTS credits: 5	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	

Course assessment
Total number of assessed students: 2

N	P
0.0	100.0

Provides: doc. RNDr. Martin Kundrát, Ph.D.
Date of last modification: 19.02.2022
Approved: prof. RNDr. Beňadik Šmajda, CSc.