COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ AJD1/07	**Course name:** English Language for PhD Students 1

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

Number of credits: 2

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 558

N	Ne	P	Pr	abs	neabs
0.0	0.0	56.99	0.0	43.01	0.0

Provides: PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD., Mgr. Zuzana Naďová

Date of last modification: 06.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: CJP/ AJD2/07	**Course name:** English Language for PhD Students 2

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

Number of credits: 3

Recommended semester/trimester of the course: 2.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 558

N	Ne	P	Pr	abs	neabs
0.0	0.0	92.29	1.43	6.27	0.0

Provides: PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD.

Date of last modification: 06.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, 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: present

Number of credits: 6

Recommended semester/trimester of the course: 1.

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 in the study of recent distribution of organisms using ecology and molecular biology and genetics.

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

Course assessment
Total number of assessed students: 24

N	P
0.0	100.0

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

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ BiSP3/11	**Course name:** Biospeleology II

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: present

Number of credits: 6

Recommended semester/trimester of the course: 2.

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination.

Learning outcomes:
Broadened contemporary knowledge in cave biology using modern scientific publications.

Brief outline of the course:
The subject offers a concise and comprehensive introduction to cave ecology. There is an emphasis on biological processes occurring in these unique environments as well as on conservation and management aspects. It includes a global range of examples and case studies from both caves and non-cave subterranean habitats.
The content of the subject is following: (1) subterranean domain, (2) sources of energy in subterranean environments, (3) survey of subterranean life, (4) ecosystem function, (5) biotic interactions and community structure, (6) adaptations to subterranean life, (7) colonization and speciation in subterranean environments, (8) geography of subterranean biodiversity, (9) some representative subterranean communities, (10) conservation and protection of subterranean habitats.

Recommended literature:
Culver D.C., Pipan T., 2009: The biology of caves and other subterranean habitats. Oxford University Press, 1-254
Romero, A., 2009: Cave biology – life in darkness. Cambridge University Press, 1-291
Wilkens H., Culver D.C., Humphreys W.F., 2000: Subterranean Ecosystems. Ecosystems of the World, vol. 30. Elsevier, 1-791

Course language:
English language.

Course assessment
Total number of assessed students: 16

N	P
0.0	100.0

Provides: prof. RNDr. Ľubomír Kováč, CSc.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/CDC/04	**Course name:** Citation in scientific journal published in the country of residence

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

Number of 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:

Course assessment
Total number of assessed students: 5

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ CHI3/11	**Course name:** Chiropterology

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: present

Number of credits: 3

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on presentation of an elaborated topic.
Oral examination.

Learning outcomes:
Broadened contemporary knowledge on bat ecology..

Brief outline of the course:
The new knowledge on bat autecology and popualtion ecology will be presented in the course. Life history and social biology. Sensoric ecology and communication. Ecology of migration. Hibernation. Echolocation. long-term trends, roost ecology, diet and foraging ecology, habitat using, molecular ecology. Ecomorophology. Ecophysiology and metabolic energetics. Macroecology, diversity.

Recommended literature:
Kunz T. H. & Fenton M. B. (eds), 2003: Bat ecology. The University of Chicago Press, Chicago and London, 779 pp.
Kunz T. H. & Parsons S. (eds), 2009: Ecological and behavioral methods for the study of bats. Second edition. Johns Hopkins University Press.

Course language:
English language.

Course assessment
Total number of assessed students: 10

N	P
0.0	100.0

Provides: doc. RNDr. Marcel Uhrin, PhD.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ CM/04	**Course name:** Citation in monograph
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
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:	
Course assessment Total number of assessed students: 0	
Provides:	
Date of last modification: 23.02.2018	
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ CZC/04	**Course name:** Citation in scientific journal published abroad
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 10	
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:	
Course assessment Total number of assessed students: 36	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/DK/04	**Course name:** Conference in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
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:	

Course assessment

Total number of assessed students: 131

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ DKC/04	**Course name:** Journals registered in the Current Contents Connect database and published in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 15	
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:	
Course assessment Total number of assessed students: 16	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ DKZU/04	**Course name:** International conference taking place in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 4	
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:	

Course assessment

Total number of assessed students: 112

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ DNC/04	**Course name:** Journals not registered in the Current Contents Connect database and published in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of 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:	
Course assessment Total number of assessed students: 40	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/DZS/14	**Course name:** Doctoral exam

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

Number of credits: 5

Recommended semester/trimester of the course:

Course level: III.

Prerequisities: ÚBEV/VEK3/11

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 48

N	P
0.0	100.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ EFR/08	**Course name:** Plant Ecophysiology

Course type, scope and the method:
Course type: Lecture / Practice
Recommended course-load (hours):
Per week: 3 / 2 **Per study period:** 42 / 28
Course method: present

Number of credits: 8

Recommended semester/trimester of the course: 2.

Course level: III.

Prerequisities:

Conditions for course completion:
Benchmark during semester.
Oral examination.

Learning outcomes:
The main goal of the course is to gain basic knowledge on plant ecophysiology.

Brief outline of the course:
Basics of plant physiology - abiotic and biotic stress, specific and inspecific responses to stress, methods of stress level evaluation. Importance of selected stress factors - light, temperature, shortage of oxygen and water, osmotic stress, heavy metals, xenobiotics and biotic ineractions (alelopaty, symbiosis, pathogenic organisms).

Recommended literature:
Larcher, W.: Physiological Plant Ecology, Springer, 2003, 513 pp.
Schulze, E.D., Beck, E., Muller-Hohenstein, K.: Plant Ecology, Springer, 2002, 702 pp.

Course language:
English language.

Course assessment
Total number of assessed students: 31

N	P
0.0	100.0

Provides: prof. RNDr. Martin Bačkor, DrSc.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ EKH3/11	**Course name:** Ecology of Insects

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: present

Number of credits: 6

Recommended semester/trimester of the course: 2.

Course level: III.

Prerequisities:

Conditions for course completion:
Elaborated theoretical topics in association with Dissertation Thesis. Running evaluation during the semester is based on individual presentation of a doctoral student.
Oral examination is based on the theoretical knowledge on insect ecology and individual presentation of the selected topic.

Learning outcomes:
Broadening of knowledge on insect ecology with the recent understanding and development trends of this scientific subject.

Brief outline of the course:
1. Effects of abiotic factors on insects.
2. Population dynamics in selected groups of insects.
3. Biocenotic characteristics of insect communities.
4. Interactions between insect communities.
5. Function and importance of insects in ecosystems.
6. Management actions for conservation of insect diversity.

Recommended literature:
Gullan P.J., Cranston P.S. (2010). The Insect: an outline of entomology. Wiley-Blackwell
Capinera J.(ed.) (2008). Encyclopedia of Entomology.
International databases (WOS, SCOPUS etc.)

Course language:
English language

Course assessment
Total number of assessed students: 13

N	P
0.0	100.0

Provides: doc. RNDr. Ľubomír Panigaj, CSc.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ FABE3/11	**Course name:** Functional Aspects of Ecosystem Biodiversity

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: present

Number of credits: 4

Recommended semester/trimester of the course: 4.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on elaborated topics which add to and extend Dissertation Thesis in theoretical level.
Running evaluation of a doctoral student will be carried out after his oral presentation (PowerPoint).
Oral examination with evaluation of theoretical knowledge and presentation of an elaborated topic.

Learning outcomes:
Broadened contemporary knowledge of functional aspects of ecosystem biodiversity.

Brief outline of the course:
Recent knowledge on processes associated with functional aspects of biodiversity of ecosystems on Earth.
1. Complex of lectures on actual topics associated with functional aspects of biodiversity and ecosystem services.
2. Individual elaboration of a selected topic related to the course and Dissertation Thesis.

Recommended literature:
Burkhard, B., Maes, J., 2017: Mapping Ecosystem Services. Pensoft Publishers, 1–376.
Primack, R.B., 2010: Essentials of conservation biology. Fifth edition. Sinauer Associates, 1–603.
International electronic sources - databases (WOS, SCOPUS etc.)

Course language:
English language.

Course assessment
Total number of assessed students: 17

N	P
0.0	100.0

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

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ GZB3/11	**Course name:** Global Biosphere Changes

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: present

Number of credits: 4

Recommended semester/trimester of the course: 4.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on elaborated topics which add to and extend Dissertation Thesis in theoretical level.
Running evaluation of a doctoral student will be carried out after his oral presentation (PowerPoint).
Oral examination with evaluation of theoretical knowledge and presentation of an elaborated topic.

Learning outcomes:
Broadened knowledge on global biosphere changes based on recent scientific literature sources.

Brief outline of the course:
Recent knowledge on processes associated with global changes of biosphere and their potential effect on various habitats on Earth.
1. Complex of lectures on actual topics associated with the global biosphere changes.
2. Individual elaboration of a selected topic related to the course and title of Dissertation Thesis.

Recommended literature:
Shugart, H. H., Woodward, F. I., 2011: Global change and the terrestrial biosphere: achievements and challenges. Wiley-Blackwell, 1–216.
ISBN: 978-1-4051-8561-5
Walker, B.H., Steffen, W. L., Canadell, J., Ingram, J.S.I., 1999: The terrestrial biosphere and global change: implications for natural and managed ecosystems. Synthesis volume. Cambridge University Press, 1–450.
International electronic databases (WOS, SCOPUS etc)

Course language:
English language.

Course assessment
Total number of assessed students: 14

N	P
0.0	100.0

Provides: prof. RNDr. Martin Bačkor, DrSc., doc. RNDr. Ľubomír Panigaj, CSc.

Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ HYD3/11	**Course name:** Hydrobiology II

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: present

Number of credits: 6

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on elaborated topics which add to and extend Dissertation Thesis in theoretical level.
Running evaluation of a doctoral student will be carried out after his oral presentation (PowerPoint).
Oral examination with evaluation of theoretical knowledge and presentation of an elaborated topic.

Learning outcomes:
To gain and enlarge actual knowledge in limnology and ecology of broad spectra of aquatic habitats.

Brief outline of the course:
Short repetitory of basic course of Hydrobiology.
Actual knowledge of limnological processes in lakes, water reservoirs and fish ponds.
Interactions of abiotic and biotic components in water habitats.
Global climate changes and their effect on water habitats.

Recommended literature:
Gibert, J., Danielopol, D.L., Stanford, J.A.,1994: Groundwater Ecology. Aquatic Biology Series, Academic Press, 1–571.
Schwoerbel, J., 1970: Methods of Hydrobiology (Freshwater Biology). Pergamon, 1–210.
Straškraba, M., Tundisi, J.G., Duncan, A., 1993: Comparative reservoir limnology and water quality management. Kluwer Academic, 1– 291.

Course language:
English language.

Course assessment
Total number of assessed students: 3

N	P
0.0	100.0

Provides: prof. RNDr. Igor Hudec, CSc.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ INVD/11	**Course name:** Biotic Invasions

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: present

Number of credits: 6

Recommended semester/trimester of the course: 3.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on selected topic preperade by doctoral student inform of presentetaion (PowerPoint).
Oral examination.

Learning outcomes:
Actual status of the most important invasive organisms in global scale, causality and mechanisms of the effect of biotic invasions, management of nature protection and invasive species.

Brief outline of the course:
1. Causality of biotic invasions.
2. Mechanisms of the effects of biotic invasions.
3. Dispersal routes and conditions of dispersal of alien taxa.
4. Important invasive organisms in Europe.
5. Invasions of terrestrial organisms and their specificity.
6. Invasions of aquatic organisms and their specificity.

Recommended literature:
Baker, H.G., Mooney, H.A., James A. Drake, 1986: Ecology of Biological Invasions of North America and Hawaii. Ecological Studies, vol. 58, Springer-Verlag, 1–321.
Pimentel, D., 2011: Biological Invasions: Economic and Environmental Costs of Alien Plant, Animal, and Microbe Species, 2nd edition, CRC Press, 1–463.
Simberloff, D., Rejmánek, M., 2011: Encyclopedia of Biological Invasions. 1st edition, University of California Press, 1–792.

Course language:
English language.

Course assessment
Total number of assessed students: 19

N	P
0.0	100.0

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

Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/JSD/14	**Course name:** Spring School for PhD Students
Course type, scope and the method: **Course type:** Lecture **Recommended course-load (hours):** **Per week: Per study period:** 4d **Course method:** present	
Number of credits: 2	
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:	

Course assessment
Total number of assessed students: 121

abs	n
100.0	0.0

Provides: prof. RNDr. Katarína Cechlárová, DrSc.
Date of last modification: 19.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/MK/04	**Course name:** International Conference

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

Number of credits: 6

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:

Course assessment
Total number of assessed students: 200

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ NZ/04	**Course name:** Non-reviewed collections of papers and monographs published abroad or in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
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:	
Course assessment Total number of assessed students: 117	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

<table>
<tr><td colspan="2">University: P. J. Šafárik University in Košice</td></tr>
<tr><td colspan="2">Faculty: Faculty of Science</td></tr>
<tr><td>Course ID: ÚBEV/ ODZP/14</td><td>Course name: Defence of Doctoral Thesis</td></tr>
<tr><td colspan="2">Course type, scope and the method:
Course type:
Recommended course-load (hours):
Per week: Per study period:
Course method: present</td></tr>
<tr><td colspan="2">Number of credits: 30</td></tr>
<tr><td colspan="2">Recommended semester/trimester of the course:</td></tr>
<tr><td colspan="2">Course level: III.</td></tr>
<tr><td colspan="2">Prerequisities:</td></tr>
<tr><td colspan="2">Conditions for course completion:</td></tr>
<tr><td colspan="2">Learning outcomes:</td></tr>
<tr><td colspan="2">Brief outline of the course:</td></tr>
<tr><td colspan="2">Recommended literature:</td></tr>
<tr><td colspan="2">Course language:</td></tr>
<tr><td colspan="2">Course assessment
Total number of assessed students: 33</td></tr>
<tr><td colspan="2"><table>
<tr><td>N</td><td>P</td></tr>
<tr><td>0.0</td><td>100.0</td></tr>
</table></td></tr>
<tr><td colspan="2">Provides:</td></tr>
<tr><td colspan="2">Date of last modification: 23.02.2018</td></tr>
<tr><td colspan="2">Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.</td></tr>
</table>

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ PDB3/11	**Course name:** Pedobiology II

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: present

Number of credits: 6

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
Oral examination.

Learning outcomes:
Broadened contemporary knowledge in soil biology: soil components and interactions, processes in soil environment, soil biodiversity.

Brief outline of the course:
The subject is focused on the recent knowledge of soil processes in the soil. Content of the subject: (1) mineral and biotic composition of the soil, (2) soil profile, specification of organic soil subhorizons, (3) soil-forming processes and pedogenesis, (4) soil biodiversity and methods of analysis of communities of living organisms, (5) abiotic and biotic interactions of soil organisms, (6) soil biota and soil processes, (7) soil biodiversity and soil protection, (8) soil degradation, (9) global changes and theit effects upon the soil environment and soil microhabitats.

Recommended literature:
Coleman, D. C., Crossley, D. A. Jr., Hendrix, P. F., 2004: Fundamentals of soil ecology, 2nd edition. Elsevier, 1-408
Eisenbeis G., Wichard W., 1987: Atlas on the biology of soil Arthropods Springer Verlag, 1-437
Lavelle P., Spain A. V., 2001: Soil Ecology. Kluwer Academic Publishers. Dordrecht-Boston-London, 1-654

Course language:
English language.

Course assessment
Total number of assessed students: 13

N	P
0.0	100.0

Provides: prof. RNDr. Ľubomír Kováč, CSc., RNDr. Andrej Mock, PhD.

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ PDS/18	**Course name:** Writing Dissertation Work

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

Number of credits: 15

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:

Course assessment
Total number of assessed students: 10

N	P
0.0	100.0

Provides:

Date of last modification: 17.04.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ PDS/14	**Course name:** Writing Dissertation Work
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 15	
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:	
Course assessment Total number of assessed students: 37	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/POVK/04	**Course name:** Work in Organizing Committee of Conference

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

Number of credits: 2

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:

Course assessment
Total number of assessed students: 44

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/PPC/04	**Course name:** Teaching activities

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

Number of credits: 1

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:

Course assessment
Total number of assessed students: 429

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/PPC/04	**Course name:** Teaching activities

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

Number of credits: 1

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:

Course assessment
Total number of assessed students: 429

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ RZ/04	**Course name:** Peer-reviewed collections of papers and monographs published abroad or in in the country of residence
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of 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:	
Course assessment Total number of assessed students: 259	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ SCI/04	**Course name:** Citation registered in Science Citation Index
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
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:	

Course assessment
Total number of assessed students: 52

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ SSOL/04	**Course name:** Samostatné štúdium odbornej literatúry
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
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:	
Course assessment Total number of assessed students: 232	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ VEK3/11	**Course name:** General Ecology III

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: present

Number of credits: 3

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
Based on the elaborated topic, which will add and augment Dissertation Thesis in theoretical level, the running evaluation of a doctoral student will be carried out after his oral presetntation (PowerPoint).
Oral examination.

Learning outcomes:
Interdisciplinarity in ecology based on utilization of data from related subjects, such as Applied Physical Geography, Geology, Pedology, Hydrology, Climatology. The importance of related scientific subjects, especially in relation to environmental monitoring during the study of biotic components of ecosystems.

Brief outline of the course:
Characterisation of the basic ecological factors (light, temperature, water, air). Air environment (composition of atmosphere, physical and chemical factors, air pollutants, organisms and air environment). Aquatic environment (water properties physical and chemical factors, gases in water, water pollutants, eutrophication and saprobity, aquatic organisms). Soil environment (physical and chemical properties, soil profile, humus layer, soil pollutants, soil organisms). Biomes and their characteristics, factors affecting biodiversity. Biospheric cycles.
Actual topics in general ecology.
Individual preparation of selected topic in association with subject and title of Dissertation Thesis.

Recommended literature:
Begon, M., Townsend, C.R., Harper, J.L., 2006: Ecology: from individuals to ecosystems. 3rd edition, Blackwell, 1–738.
Gardener, M., 2014: Community ecology: analytical methods using R and Excel. Pelagic Publishing, 1–556.
Townsend, C.R., Begon, M., Harper, J.L., 2008: Essentials of Ecology. 3rd Edition, Blackwell, 1–530.

Course language:
English language.

Course assessment
Total number of assessed students: 26

N	P
0.0	100.0

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

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ VPBB/11	**Course name:** Review of a Bachelor Thesis
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 2	
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:	
Course assessment Total number of assessed students: 15	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/VPSV/04	**Course name:** Supervision of Student's Scientific Activity

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

Number of credits: 6

Recommended semester/trimester of the course: 6., 8.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 15

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ZKC/04	**Course name:** Journals registered in the Current Contents Connect database and published abroad
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of credits: 20	
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:	
Course assessment Total number of assessed students: 232	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ZNC/04	**Course name:** Journals not registered in the Current Contents Connect database and published abroad
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of 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:	
Course assessment Total number of assessed students: 52	

abs	n
100.0	0.0

Provides:
Date of last modification: 23.02.2018
Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ZSP/04	**Course name:** Realisation of study/research stay abroad

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

Number of credits: 2

Recommended semester/trimester of the course: 6., 8.

Course level: III.

Prerequisities:

Conditions for course completion:

Learning outcomes:

Brief outline of the course:

Recommended literature:

Course language:

Course assessment
Total number of assessed students: 88

abs	n
100.0	0.0

Provides:

Date of last modification: 23.02.2018

Approved: Co-guaranteedoc. RNDr. Marcel Uhrin, PhD.Guaranteeprof. RNDr. Ľubomír Kováč, CSc.Guaranteeprof. RNDr. Igor Hudec, CSc.