CONTENT

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ PMRB/19	**Course name:** Advanced methods in Plant Biology

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 ECTS 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:

Notes:

Course assessment
Total number of assessed students: 2

N	P
0.0	100.0

Provides: prof. RNDr. Martin Bačkor, DrSc.

Date of last modification: 21.02.2019

Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ PVS/04	**Course name:** Author's patents, discoveries, software
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS credits: 2	
Recommended semester/trimester of the course:	
Course level: III.	
Prerequisities:	
Conditions for course completion: Patent filed, invention, software product created.	
Learning outcomes: The PhD student demonstrates the ability to create an innovative product in a given scientific field, or with impact on an interdisciplinary scale or in technical practice.	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 1	

abs	n
100.0	0.0

Provides:	
Date of last modification: 08.11.2022	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ BRS1/03	**Course name:** Biology of Plant Symbioses

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

Number of ECTS credits: 3

Recommended semester/trimester of the course:

Course level: II., III.

Prerequisities:

Conditions for course completion:
1. presentation of a semester project on a selected topic
2. proving knowledge of the subject by oral exam

Learning outcomes:
After completing the subject, the student will get knowledge and understanding of what symbiosis is, what is its role and meaning, with a focus on interactions in the plant kingdom. The student should be able to apply the acquired knowledge in practice, such as when growing crops or in gardening. He should also be able to use the knowledge gained by completing this subject when conducting experiments related to symbioses.

Brief outline of the course:
1. Introduction to the study of symbioses
2. Viruses and their symbiosis with fungi, algae and plants
3. Bacterial associations with plants
4. Fungal associations with fungi, algae and plants
5. Associations of algae with protozoa and invertebrates
6. Symbiosis of flowering plants
7. Symbiosis of coral reefs
8. Endosymbiosis
9. Morphological, cytological, physiological and biochemical aspects of the most famous examples plant symbioses.
10. signals and communication in plant symbiosis (signaling of cyanobacteria with plants)
11. Signals and communication in plant symbiosis (signaling of ectomycorrhizal symbioses)
12. Ecological use of plant symbioses in practice
13. presentation of the semester project

Recommended literature:
Van den Hoek, C. et al. 1995: Algae, an introduction to phycology,
Deacon, J.W. 1997: Modern Mycology
Paracer S., Ahmadjian V., 2000: Symbiosis: an introduction to Biological Associations

Course language:

slovak, english

Notes:

Course assessment
Total number of assessed students: 338

A	B	C	D	E	FX	N	P
95.27	0.0	0.0	0.0	0.0	0.0	0.0	4.73

Provides: prof. RNDr. Martin Bačkor, DrSc.

Date of last modification: 31.07.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

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: present

Number of ECTS credits: 5

Recommended semester/trimester of the course:

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: 98

A	B	C	D	E	FX	N	P
21.43	20.41	27.55	11.22	4.08	0.0	0.0	15.31

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

Date of last modification: 21.09.2021

Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 20	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 0	
Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

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 ECTS credits: 10	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 63	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 5	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 6	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 20	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 84	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ SMPR/04	**Course name:** Co-worker of project supported by international grant schemes
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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:	
Notes:	

Course assessment

Total number of assessed students: 43

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ SDPR/04	**Course name:** Co-worker of project supported by national grant schemes
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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:	
Notes:	

Course assessment
Total number of assessed students: 486

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 2

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Active participation in the home conference.

Learning outcomes:
By actively participating in the national scientific conference, the PhD student demonstrates a high degree of ability to identify, evaluate, and apply correct scientific methods or research methodology in his scientific field. He demonstrates the ability to reflect on a specific scientific problem by using the latest approaches and applying them critically. Demonstrates competence in using existing theories and concepts in an innovative way, as well as generating new original scientific knowledge and communicating research results to a wider audience using adequate means and through the Slovak language.

Brief outline of the course:

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 164

abs	n
100.0	0.0

Provides:

Date of last modification: 08.11.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/CK1/03	**Course name:** Cytogenetics and Karyology

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 ECTS credits: 4

Recommended semester/trimester of the course:

Course level: II., III.

Prerequisities:

Conditions for course completion:
written tests, oral examination;
Practicals: The protocols and worksheets from the practical activities or distance learning are required. The e-learning course UBEV/Cytogenetika a karylógia is available in Moodle.

Learning outcomes:
To gain knowledge and experience on genetic processes at the cell level using the newest scientific findings of cytogenetics. To get acquainted in detail with the results and significance of human genome mapping (HUGO project).

Brief outline of the course:
Organisation of eukaryotic genome. Nuclear skeleton. Nucleolus, nucleolar skeleton. Chromatin structure and changes of chromatin. Levels of DNA organisation in cell nucleus. Chromosomes. Polythene chromosomes. Cell cycle. Genetic regulation of a cell cycle. Genetic regulation of cell differentiation. Apoptosis. Telomeres and function of telomerase. Molecular cytology. Basic characteristics of the Human genom project - what we can learn from it?

Recommended literature:
Snustad, P.D., Simmons, M.J.: Principles of Genetics. John Wiley and Sons, 5th edition 2009, 871 pp.
Periodicals
Internet sources

Course language:

Notes:

Course assessment
Total number of assessed students: 1582

A	B	C	D	E	FX	N	P
25.22	14.85	15.74	14.22	18.33	10.75	0.0	0.88

Provides: prof. RNDr. Eva Čellárová, DrSc., doc. RNDr. Katarína Bruňáková, PhD.

Date of last modification: 26.07.2021

Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ ODZP/14	**Course name:** Defence of Doctoral Thesis
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS credits: 30	
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: 60	

N	P
0.0	100.0

Provides:
Date of last modification: 03.05.2015
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ DZS/14	**Course name:** Dissertation examination
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS credits: 20	
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:	
Notes:	
Course assessment Total number of assessed students: 70	

N	P
0.0	100.0

Provides:
Date of last modification: 03.05.2015
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 2

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
Completion of e-course English for PhD Students (lms.upjs.sk), consultations (1-3).
Written assignments - Professional/Academic CV, Short Academic Biography.

Learning outcomes:
The development of students´ language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2.

Brief outline of the course:
Specific aspects of academic and professional English with focus on correct pronunciation, vocabulary development (noun and verb collocations, phrasal verbs, prepositional phrases, word-formation, formal/informal language, etc.), selected aspects of English grammar (prepositions, grammar tenses, passive voice, etc.), academic writing (professional/academic CV, Short Academic Biography).

Recommended literature:
Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017.
Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí – cvičebnica. Košice, Vydavateľstvo ŠafárikPress, 2021.
Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021.
McCarthy, M., O´Dell, F.: Academic Vocabulary in Use. CUP, 2008.
Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011.
Armer, T.: Cambridge English for Scientists. CUP, 2011.
lms.upjs.sk

Course language:
English, level B2 according to CEFR

Notes:

Course assessment
Total number of assessed students: 738

N	Ne	P	Pr	abs	neabs
0.0	0.0	48.1	0.0	51.9	0.0

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

Date of last modification: 16.09.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 3	
Recommended semester/trimester of the course: 2.	
Course level: III.	
Prerequisities:	
Conditions for course completion: Test, oral exam in accordance with the exam requirements (https://www.upjs.sk/filozoficka-fakulta/cjp/doktorandi-upjs/)	
Learning outcomes: The development of students´ language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the language for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2.	
Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference.	
Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O´Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011.	
Course language: B2 level according to CEFR	
Notes:	

Course assessment
Total number of assessed students: 729

N	Ne	P	Pr	abs	neabs
0.27	0.0	93.83	1.1	4.8	0.0

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

Date of last modification: 10.03.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ NEM/04	**Course name:** Implementation of new experimental methodology
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 98	

abs	n
100.0	0.0

Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

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 ECTS 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:	
Notes:	

Course assessment

Total number of assessed students: 239

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 123	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 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: 65

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 5	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 52	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 20	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 289

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 15	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 19	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 2	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 133	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: KPE/ PgVU/17	**Course name:** Pedagogy for University Teachers

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

Number of ECTS credits: 5

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
1. Development of a teaching diary—100%
2. Compulsory active participation and attendance in accordance with the Study Regulations.

Learning outcomes:
Students will be able to:
Apply didactic principles, methods, forms, and tools in the teaching of a specialised subject. Specify the educational procedures of a university teacher in subject teaching, pedagogical diagnostics, evaluation of learning outcomes, and self-reflection. Present rationalisation and streamlining possibilities in the teaching of specialised subjects. Apply educational competencies of university teachers taking into account the peculiarities of educating university students.

Brief outline of the course:
The personality of a university teacher. Teaching styles. Student in university education. Student learning styles. Possibilities of adapting teaching styles and student learning styles. University teacher–student interaction and communication in the teaching process. Pedagogical competencies of a university teacher. Didactic analysis of the curriculum; teaching materials and textbooks. Forms of university teaching. Methods of university teaching. Verification methods and student assessment. Creation of a didactic test. Designing university teaching process. University teacher self-reflection.

Recommended literature:
Čapek, R. (2015). Moderní didaktika. Lexikon výukových a hodnoticích metod. Praha, Grada Publishing, a.s.
Danek, J. (2014). Pedagogická komunikácia na vysokej škole. Trnava, Univerzita sv.Cyrila a Metoda v Trnave.
Dargová, J. (2001). Tvorivé kompetencie učiteľa. Prešov, Privat Press.
Dvořáček, J. (2014). Základy pedagogiky. Praha, Oeconomica.
Hupková, M., Petlák, E. (2004). Sebareflexia a kompetencie v práci učiteľa. Bratislava, IRIS.
Kyriacou, CH. (1996). Klíčové dovednosti učitele. Praha, Portál.
Mertin, V. a kol. (2012). Metody a postupy poznávaní žáka: pedagogická diagnostika. Praha, Wolters Kluwer.
Petty,G. (2013). Moderní vyučování. Praha, Portál.

Prucha, J. (2013). Moderní pedagogika. Praha, Portál.
Sirotová, M. (2014). Vysokoškolský učiteľ v edukačnom procese. Trnava, Univerzita sv.Cyrila a Metoda v Trnave.
Slávik, M. a kol. (2012). Vysokoškolská pedagogika. Praha, Grada.
Šebeň Zaťková, T. (2014). Úvod do vysokoškolskej pedagogiky. Trnava, Univerzita sv.Cyrila a Metoda v Trnave.
Turek, I. (2014). Didaktika. Bratislava, Wolters Kluwer, s.r.o.
Zormanová, L. (2014). Obecná didaktika. Praha, Grada.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 78

abs	n	neabs
98.72	0.0	1.28

Provides: doc. PaedDr. Renáta Orosová, PhD.

Date of last modification: 07.09.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS credits: 5	
Recommended semester/trimester of the course: 2., 4., 6., 8.	
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: 333	

abs	n
100.0	0.0

Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/RR/08	**Course name:** Plant Reproduction

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 ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Completion of the subject is realized through lectures and self-study of literature. Practical questions are solved in the contexts that currently arise from the topic of the solved dissertation and its connection with plant reproduction. At the end of the lectures, there is an oral exam.

Learning outcomes:
To gain deep knowledge about the evolution of reproductive systems, the mechanisms and processes of reproduction and the impact of different reproductive systems on the evolution of taxa. Be able to synthesize knowledge from plant embryology and evolutionary biology for a better understanding of reproductive biology issues. Learn the influence of ecological factors on plant reproduction and the relationships between plants and animals that relate to plant reproduction. Be able to apply the acquired knowledge to solving various tasks within plant physiology, but also in practical conditions, e.g. in agriculture, forestry, biota assessment and nature conservation.

Brief outline of the course:
1. History of plant reproductive biology.
2. Evolutionary trends in plant reproduction.
3. Reproductive structures of spore and seed plants.
4. Female and male gametophyte. Fertilization, endosperm, embryo.
5. Phenological reproductive data.
6. Ultraviolet reflectance and absorbance of reproductive structures.
7. Pollination vectors. Nectar.
8. Propagation of plants.
9. Reproductive systems of plants. Panmixis, self-fertilization, apomixis.
10. Evolutionary significance of individual breeding systems.
11. Plant reproduction and breeding.
12. Application of knowledge about plant reproduction in agriculture.

Recommended literature:
Cresti M.: Sexual Plant Reproduction. - Springer Science, 2012.
Pullaiah T: Plant Reproduction, 2nd. ed., Scientific Publishers, 2019.
Erdelská O., Švubová R., Mártonfiová L., Lux, A.: Embryológia krytosemenných rastlín, Veda, Bratislava 2017.

Horandl E., Grossniklaus U., van Dijk P. J., Sharbel T. F.: Apomixis. Evolution, Mechanisms and Perspectives. - A.R.G. Gantner Verlag K. G., Rugell, Liechtenstein, 2007.
Richards A.J.: Plant Breeding Systems. 2nd. ed. - Chapman & Hall, London, 1997.
Simpson M. G.: Plant Systematics, 3rd ed. - Academic Press, 2019.
Stuessy T. F., Crawford D. J., Soltis D. E., Soltis P. S.: Plant Systematics. The Origin, Interpretation, and Ordering of Plant Biodiversity. - Koeltz Scienfific Books, 2014.

Course language:

Notes:

Course assessment
Total number of assessed students: 23

N	P
0.0	100.0

Provides: prof. RNDr. Pavol Mártonfi, PhD.

Date of last modification: 24.07.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KPPaPZ/PsVU/17	**Course name:** Psychology for University Lecturers

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

Number of ECTS credits: 5

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Case study, micro-output, its analysis
Current modifications of the course are listed in the electronic bulletin board of the course.

Learning outcomes:
After completing the course, students can:
and Understand, summarize and explain selected psychological knowledge from cognitive psychology, emotion and motivation psychology, personality psychology, developmental, social, educational psychology and health psychology.
b) apply the above psychological knowledge necessary for the professional, competent performance of university teaching practice of doctoral students
c) to create and implement the teaching of a professional topic with applied psychological knowledge
d) evaluate their performance and the performance of their classmates, provide feedback

Brief outline of the course:
The content of the course is based on selected psychological knowledge of cognitive psychology, psychology of emotions and motivation, personality psychology, developmental, social, educational psychology and health psychology. Teaching is realized by a combination of lectures with interactive, experiential methods, discussion, open communication with mutual respect, support of independence, activity and motivation of students. Syllabus: University teacher and his work in the teaching process with a focus on: teachers in relation to themselves (cognitive, personal, social and competencies in the use of methods), in relation to students and as part of the teacher-student relationship on the basis of selected areas of cognitive psychology, psychology of emotions and motivation, developmental psychology, social psychology, educational psychology and health psychology with application to the university environment

Recommended literature:
Alexitch, L. R. (2005). Applying social psychology to education. Social Psychology.–Ed.: Schneider F., Gruman J., Coutts L.–Sage Publications, Inc, 205-228.
Fry, H., Ketteridge, S., & Marshall, S. (2008). A handbook for teaching and learning in higher education: Enhancing academic practice. Routledge.
Mareš, J.: Pedagogická psychologie. Portál, 2013.

Kniha psychologie. Universum, 2014
Čáp, J., Mareš, J.: Psychologie pro učitele. Praha: Portál 2007.
Vágnerová, M.: Školní poradenská psychológie pro pedagogy. Praha: Karolínum 2005.

Course language:
slovak

Notes:

Course assessment
Total number of assessed students: 70

abs	n	neabs
100.0	0.0	0.0

Provides: PhDr. Anna Janovská, PhD.

Date of last modification: 24.06.2022

Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 109	

abs	n
100.0	0.0

Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ IG/04	**Course name:** Receiving a grant under Internal Scientific Grant System (VVGS)
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS credits: 10	
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:	
Notes:	
Course assessment Total number of assessed students: 169	

abs	n
100.0	0.0

Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

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 ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 27	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚBEV/ VKFR/08	**Course name:** Selected Plant physiology chapters

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 ECTS credits: 8

Recommended semester/trimester of the course: 1.

Course level: III.

Prerequisities:

Conditions for course completion:
1. Elaboration of one term paper on a previously assigned topic.
2. The examination of the subject takes place in an oral form on a randomly drawn question. The student will present the topic of his term paper and then a discussion will take place with the teacher on the given topic.

Learning outcomes:

Brief outline of the course:
1. Metabolism, metabolome, transcriptome and their significance for plant physiology.
2. Photosynthesis: the influence of light on plant growth and development, response to ecological factors
3. Photosynthesis II: Enzyme Rubisco and its importance for photosynthetic processes. Metabolic adaptations and their significance for plants.
4. Plant membranes and their physiological significance. Transport processes of plants.
5. Nitrogen intake, nitrogen reduction and their regulation, function of NO and other nitrogenous substances.
6. Primary and secondary assimilation of nitrogen, regulation of nitrogen and carbon metabolism. Connections between photosynthesis and nitrogen metabolism.
7. Amino acids, their formation, transport, accumulation and importance of free amino acids
8. Importance of catabolic processes in plant leaves
9. Lipid metabolism, importance of lipids, lipid peroxidation. Stress hormones, jasmonates
10. Oxidative stress, antioxidants and enzymes.
11. Stress metabolites, phytoalexins
12. Regulation of plant flowering, plant biorhythms
13. New knowledge from plant physiology, selected topic from the latest publications in the field.

Recommended literature:
Murphy A.S. et al. The plant plasma membrane. Springer-Verlag Berlin Heidelberg 2011;
Taiz L.et al. Plant Physiology and Development. Sixth editon. Sinauer ass.,Sunderland 2014;
Bhatla S.C., Lal M.A. Plant Physiology, development and metabolism. Springer Nature Singapore Pte Ltd. 2018;
Papers in scientific journals.

Course language:	
Notes:	
Course assessment Total number of assessed students: 31	
N	P
0.0	100.0
Provides: doc. RNDr. Peter Paľove-Balang, PhD.	
Date of last modification: 31.07.2022	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

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 ECTS credits: 2

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:
Active participation in the Spring School of PhD students of UPJŠ.

Learning outcomes:
By actively participating in the Spring School of PhD Students of UPJŠ, the PhD student demonstrates a high level of ability to process the issues of his dissertation for a multidisciplinary audience with an emphasis on clarifying the motivation, scientific problem, processing methodology and own contribution to the solution of the selected topic. The PhD student demonstrates the ability to professionally discuss various research topics, present his own positions and accept a plurality of opinions. Demonstrates the ability to communicate research results to a wider professional audience with adequate means and through the Slovak language.

Brief outline of the course:
1. Interdisciplinary lectures from the fields of medicine, natural sciences, law, public affairs, humanities. Lecturers - top foreign or national experts from the mentioned fields.
2. Scientific lectures in sections created within related disciplines. Lecturers - top experts from UPJŠ from the mentioned fields.
3. Scientific contributions of PhD students in sections of related fields.
4. Panel discussions on the issue of PhD studies and current trends in the development of scientific disciplines at UPJŠ.

Recommended literature:
Proceedings of the Spring School of Doctoral Students.

Course language:

Notes:

Course assessment
Total number of assessed students: 187

abs	n
100.0	0.0

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 08.11.2022
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 24	

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ VYS/04	**Course name:** Talk given at scholar seminars of department or institute
Course type, scope and the method: **Course type:** **Recommended course-load (hours):** **Per week: Per study period:** **Course method:** present	
Number of ECTS 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:	
Notes:	

Course assessment

Total number of assessed students: 285

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	

Course assessment

Total number of assessed students: 549

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	

Course assessment
Total number of assessed students: 549

abs	n
100.0	0.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.

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 ECTS 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:	
Notes:	
Course assessment Total number of assessed students: 49	

abs	n
100.0	0.0

Provides:	
Date of last modification:	
Approved: prof. RNDr. Pavol Mártonfi, PhD.	

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 ECTS credits: 0	
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: 11

N	P
0.0	100.0

Provides:
Date of last modification:
Approved: prof. RNDr. Pavol Mártonfi, PhD.