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## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ ACM/12		<b>Course name:</b> Analytical Cytometry					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 2 <b>Per study period:</b> 14 / 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 4							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b>							
<b>Learning outcomes:</b> The goal of the course is to teach the students fundamental theoretical and practical aspects of analytical cytometry. The course covers multiple areas of methods in microscopy with special focus on fluorescence and its application in confocal microscopy, morphometric measurements and their applications in cytology, determination of vital parameters and live cell imaging, basic methods for sample preparation etc.							
<b>Brief outline of the course:</b> Fundamentals of fluorescent methods, principles of fluorescence. Principles of confocal microscopy Analyses on living cells – principles, hardware requirements, methods for vital parameters analyses, imaging methods with regard to lipids, cytoskeleton dynamics or cell division. Fluorescent dyes and their applications in analytical cytometry – nucleic acid, lipid, proteins, cytoskeleton stainings, visualization of cell organelles, vital stainings, membrane transport, reactive oxygen and nitrogen species (ROS, NOS), membrane potential, pH etc.							
<b>Recommended literature:</b> 1. R.D. Goldman a kol.: Live Cell Imaging – A Laboratory Manual, Cold Spring Harbour Laboratory Press, 2010 2. J.B. Pawley a kol.: Handbook of Biological Confocal Microscopy, Springer, 2006 3. D. Anselmetti a kol.: Single Cell Analysis, Wiley-Blackwell, 2009 4. A. Hibbs a kol.: Confocal Microscopy for Biologists, Kluwer Academic/Plenum Publishers, 2004							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 34							
A	B	C	D	E	FX	N	P
2.94	0.0	0.0	0.0	0.0	0.0	0.0	97.06

<b>Provides:</b> RNDr. Rastislav Jendželovský, PhD.
<b>Date of last modification:</b> 29.01.2020
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ AMK/15		<b>Course name:</b> Aplikovaná mikrobiológia					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 5							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Attendance of practicals (at least 90%), final examination							
<b>Learning outcomes:</b> The students acquire in-depth knowledge on the important role of microorganisms in different fields like food (production of beer, wine, milk products, probiotics), chemical and pharmaceutical industry (production of vitamins, hormones, amino acids, enzymes, commodity chemicals), vaccines and their production, wastewater treatment, as well as microbial bioremediation, biofuels and biomining.							
<b>Brief outline of the course:</b> Application of bacteria in industrial processes, biochemicals production. Application of recombinant DNA techniques in industry. Lactic acid bacteria and its application in food industry. Microbiology in food quality control. Application of microorganisms in environment protection – wastewater treatment, bioremediation, biofuels, microbiology of biogas plants.							
<b>Recommended literature:</b>							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 14							
A	B	C	D	E	FX	N	P
50.0	14.29	21.43	7.14	0.0	0.0	0.0	7.14
<b>Provides:</b> doc. RNDr. Peter Pristaš, CSc., prof. RNDr. Jana Sedláková, PhD., RNDr. Lenka Maliničová, PhD.							
<b>Date of last modification:</b> 13.01.2021							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ PVS/04	<b>Course name:</b> Author's patents, discoveries, software
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 1	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ CM/04	<b>Course name:</b> Citation in monograph
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 20	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 0	
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ CZC/04	<b>Course name:</b> Citation in scientific journal published abroad
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 10	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 48	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ CDC/04	<b>Course name:</b> Citation in scientific journal published in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 6	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/SCI/04	<b>Course name:</b> Citation registered in Science Citation Index
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 20	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 69	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ SMPR/04	<b>Course name:</b> Co-worker of project supported by international grant schemes
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 15	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 40	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/SDPR/04	<b>Course name:</b> Co-worker of project supported by national grant schemes
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 420	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/DK/04	<b>Course name:</b> Conference in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 145	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/CK1/03		<b>Course name:</b> Cytogenetics and Karyology					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 2 <b>Per study period:</b> 14 / 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 4							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> written tests, oral examination Practicals: The protocols and worksheets will be evaluated in case of the practical activities and the distance method of education, respectively. The e-learning course UBEV/Cytogenetika a karyológia in the Moodle is used.							
<b>Learning outcomes:</b> To gain knowledge and experience in genetic processes at the cell level using the newest scientific findings of cytogenetics and molecular cytology. To get acquainted in detail with the results coming from human genome mapping.							
<b>Brief outline of the course:</b> 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?							
<b>Recommended literature:</b> Russel, J.P.: Genetics, Third Edition, Harper Collins Publisher, New York 1992 Periodicals Internet sources							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 1389							
A	B	C	D	E	FX	N	P
24.55	15.05	15.84	14.04	17.93	11.74	0.0	0.86
<b>Provides:</b> prof. RNDr. Eva Čellárová, DrSc., RNDr. Katarína Bruňáková, PhD.							

<b>Date of last modification:</b> 20.02.2021
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ CTP1/01		<b>Course name:</b> Cytopathology					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 3							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Oral examination							
<b>Learning outcomes:</b> To provide the students with a knowledge of basic biological principles of carcinogenesis.							
<b>Brief outline of the course:</b> Tumor development. Tumor growth and metastatic potential. Cell cycle regulation and pathogenesis of cancer. Apoptosis in tumor growth and metastasis. Oncogenes and cancer. Tumor suppressor genes. Metastasis suppressor genes. Angiogenesis in cancer. Cell surface glycoproteins and their receptors. Proteinases and their inhibitors in cancer invasion. Radio-, chemo- and immunotherapy.							
<b>Recommended literature:</b> Sherbet, G.V., Lakshmi, M. S.: The Genetics of Cancer. Genes Associated with Cancer Invasion, Metastasis and Cell Proliferation. Academic Press, London, 1997 Shebert, G. V.: The biology of tumor malignancy. Academic Press, London, 1982							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 323							
A	B	C	D	E	FX	N	P
39.94	21.67	20.74	8.98	5.26	2.17	0.0	1.24
<b>Provides:</b> prof. RNDr. Peter Fedoročko, CSc.							
<b>Date of last modification:</b> 03.05.2015							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ODZP/14	<b>Course name:</b> Defence of Doctoral Thesis
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 30	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 47	
N	P
0.0	100.0
<b>Provides:</b>	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/DZS/14	<b>Course name:</b> Dissertation examination
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 20	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b> ÚBEV/VEK3/11	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 58	
N	P
0.0	100.0
<b>Provides:</b>	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> CJP/AJD1/07		<b>Course name:</b> English Language for PhD Students 1			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> III.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Written assignments - professional CV, short academic biography (200-350 words). distance mode of instruction using MS teams					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 649					
N	Ne	P	Pr	abs	neabs
0.0	0.0	51.31	0.0	48.69	0.0
<b>Provides:</b> PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD.					
<b>Date of last modification:</b> 11.02.2021					
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> CJP/AJD2/07	<b>Course name:</b> English Language for PhD Students 2
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Distance mode of instruction. Online consultations. Test, oral exam in accordance with the exam requirements ( <a href="https://www.upjs.sk/filozoficka-fakulta/cjp/doktorandi-upjs/">https://www.upjs.sk/filozoficka-fakulta/cjp/doktorandi-upjs/</a> )	
<b>Learning outcomes:</b> Development of students' language skills, improvement of students' linguistic competencies (selected aspects of English pronunciation, vocabulary and syntax), development of students' pragmatic competence (selected aspects of functional grammar) with focus on English for academic and specific purposes. B2/C1 level of language competence (according to CEFR.)	
<b>Brief outline of the course:</b> Specific aspects of academic and professional English with focus on 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.), selected functional grammar (expressing opinion, cause/effect, arguments, examples, etc.). Academic communication. Cross-language interference.	
<b>Recommended literature:</b> Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2015 McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008 Štěpánek, L., J. De Haaf a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011 Blašková, K.: Handbook of English for Postgraduate Students. Vyd. SPRINT Bratislava, 2007 Dušková, L. a kol.: Hovorová angličtina pre vedeckých a odborných pracovníkov. Veda. Bratislava, 1982 Armer, T.: Cambridge English for Scientists. CUP, 2011 Porter, D.: Check your vocabulary for Academic English. Macmillan Publishers Limited, 2008 Oxford Collocations Dictionary for students of English. OUP, 2002 lms.upjs.sk	
<b>Course language:</b>	

B2/C1 level according to CEFR					
<b>Notes:</b>					
<b>Course assessment</b>					
Total number of assessed students: 607					
N	Ne	P	Pr	abs	neabs
0.33	0.0	92.59	1.32	5.77	0.0
<b>Provides:</b> PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD.					
<b>Date of last modification:</b> 10.02.2021					
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ EMK/15		<b>Course name:</b> Environmentálna mikrobiológia					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 5							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Attendance of practicals (at least 90%), final oral examination							
<b>Learning outcomes:</b> To provide students data on participation of microorganisms in biosphere processes, characteristics of most frequently occurring microbial communities and interactions of microorganisms with other organisms.							
<b>Brief outline of the course:</b> Evolution and biodiversity of microorganisms, microorganisms in environment, the influence of abiotic factors on microorganisms, biogeochemical cycles, interactions between microorganisms and other organisms							
<b>Recommended literature:</b>							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 62							
A	B	C	D	E	FX	N	P
51.61	24.19	1.61	0.0	3.23	0.0	0.0	19.35
<b>Provides:</b> doc. RNDr. Peter Pristaš, CSc., prof. RNDr. Jana Sedláková, PhD., RNDr. Lenka Maliničová, PhD.							
<b>Date of last modification:</b> 03.05.2015							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ FG/14	<b>Course name:</b> Functional genomics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> II., III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Practical courses protocols, Written exam	
<b>Learning outcomes:</b> Functional genomics attempts to answer questions about the function of DNA at the levels of genes, RNA transcripts, and proteins. A key characteristic of functional genomics studies is their genome-wide approach to these questions, generally involving high-throughput methods rather than a more traditional “gene-by-gene” approach. The outcome of this course will be understanding of the approaches and methods used in functional genomics and their application in research as well as in practice.	
<b>Brief outline of the course:</b> <ul style="list-style-type: none"> <li>• Introduction to functional genomics, Biological databases and other resources for functional genome analysis, A real-case applications of the functional genomics</li> <li>• Genome and functional genomics: sequenced model organisms, conceptual and methodological input of genome sequencing, structural vs. functional genome annotation</li> <li>• Genome-wide reverse genetics: techniques to create collections of genome-wide mutants and their use in functional genomics</li> <li>• Transcriptomics: methods to obtain transcriptome data, in silico processing of transcriptomic data, differential expression</li> <li>• Proteomics: methods to obtain proteome data, quantitative vs. qualitative proteomics, data analysis, data mining</li> <li>• Metabolomics: methods to obtain metabolomic data, quantitative vs. qualitative metabolomics, data analysis, data mining</li> <li>* Interactomics - protein networks, methods in interactome and signalome studies, data analysis, practical use of the acquired knowledge on interactome and signalome</li> </ul>	
<b>Recommended literature:</b> J. Pevsner: Bioinformatics and Functional Genomics, 3rd Edition, ISBN: 978-1-118-58178-0 Internet sources	
<b>Course language:</b> English	

<b>Notes:</b>							
<b>Course assessment</b>							
Total number of assessed students: 112							
A	B	C	D	E	FX	N	P
24.11	30.36	23.21	6.25	11.61	1.79	0.0	2.68
<b>Provides:</b> RNDr. Katarína Bruňáková, PhD., RNDr. Andrea Kimáková, PhD., RNDr. Katarína Nigutová, PhD., RNDr. Linda Petijová, PhD., RNDr. Andrea Schreiberová, PhD.							
<b>Date of last modification:</b> 17.02.2021							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ GMd/12	<b>Course name:</b> Génové manipulácie
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 6	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 7	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Peter Pristaš, CSc., RNDr. Mariana Kolesárová, PhD.	
<b>Date of last modification:</b> 06.02.2021	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ GC1/01		<b>Course name:</b> Human Genetics					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 5							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Active participation in practicals, written exam.							
<b>Learning outcomes:</b> To provide students with a basics of human genetics, with the role of genetic factors in pathologic processes, with the inheritance, diagnostics and treatment of genetic disorders.							
<b>Brief outline of the course:</b> The genetic basics of physiological variability and pathological traits of individuals; human population genetics; immunological variability; the patterns of inheritance and pedigree problem solving; the basic methods used in human genetics - genealogy, linkage analysis and the gene mapping, cytogenetic analysis and karyotyping, the DNA diagnosis of pathological traits; the treatment of genetic disorders.							
<b>Recommended literature:</b> Lewis R.: Human Genetics: Concepts and Applications, 9th Edition. McGraw-Hill, New York, 2010 Passarge E.: Genetics, 3rd Edition, Thieme, 2007							
<b>Course language:</b> slovak and english							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 1293							
A	B	C	D	E	FX	N	P
24.83	14.77	16.4	13.77	17.87	11.91	0.0	0.46
<b>Provides:</b> RNDr. Katarína Bruňáková, PhD.							
<b>Date of last modification:</b> 09.02.2021							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ NEM/04	<b>Course name:</b> Implementation of new experimental methodology
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 15	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 77	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ MK/04	<b>Course name:</b> International Conference
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 6	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 220	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/DKZU/04	<b>Course name:</b> International conference taking place in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 118	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ ZNC/04	<b>Course name:</b> Journals not registered in the Current Contents Connect database and published abroad
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 60	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ DNC/04	<b>Course name:</b> Journals not registered in the Current Contents Connect database and published in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 46	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ ZKC/04	<b>Course name:</b> Journals registered in the Current Contents Connect database and published abroad
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 20	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 259	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/DKC/04	<b>Course name:</b> Journals registered in the Current Contents Connect database and published in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 15	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 17	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/MOG/03	<b>Course name:</b> Model Organisms in Genetics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> II., III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> protocols, participation at a mini conference: Model organism for my diploma thesis, oral examination	
<b>Learning outcomes:</b> To provide the students with an information on model systems of prokaryotic and eukaryotic organisms used in genetic research.	
<b>Brief outline of the course:</b> Basic properties of model organisms used in genetics. Viral models in genetics (Tobacco mosaic virus, Lambda phage, PhiX174 phage). Prokaryotic model systems (Escherichia coli, Diplococcus pneumoniae, Agrobacterium tumefaciens and A. rhizogenes). Another prokaryotic models (Bacillus subtilis, Caulobacter crescentus, Mycoplasma genitalium, Synechocystis sp.), Model systems of simple eukaryotic organisms (Saccharomyces cerevisiae, Neurospora crassa, Aspergillus nidulans, Dictiostelium discoideum). Animal model systems (Drosophila melanogaster, Caenorhabditis elegans, Danio rerio, Mus musculus). Another animal models (Xenopus laevis, Ambystoma mexicanum, Chrysemys picta, Anolis carolinensis, Fugu rubripes, Gallus gallus, Heterocephalus glaber). Plant model organisms (Pisum sativum, Arabidopsis thaliana, Nicotiana tabacum, Zea mays, Selaginella moellendorffii, Brachypodium distachyon, Lotus japonicus, Populus trichocarpa). Mendel's laws. Morgan's rules. Genetic databases. Model organisms and their role in the treatment of human genetic disorders.	
<b>Recommended literature:</b> Snustad, P.D., Simmons, M.J.: Genetika. Nakladatelství Masarykovy univerzity, Brno, 2009, 871 str., Genetic periodicals, Internet sources	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>							
Total number of assessed students: 1371							
A	B	C	D	E	FX	N	P
24.07	15.1	15.83	13.86	18.38	11.89	0.0	0.88
<b>Provides:</b> prof. RNDr. Eva Čellárová, DrSc., RNDr. Andrea Kimáková, PhD., RNDr. Katarína Nígutová, PhD.							
<b>Date of last modification:</b> 20.02.2021							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/MZO1/03		<b>Course name:</b> Molecular basis of ontogenetic development					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 3							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Oral examination.							
<b>Learning outcomes:</b> Acquiring of basic knowledge of principles and molecular-biological mechanisms of ontogenetic development of animal and plant organisms.							
<b>Brief outline of the course:</b> Regulation of the ontogenetic development in eukaryotic organisms. Program of the ontogenetic development. Cell determination and differentiation. Molecular mechanisms of formation of specialised cell types. Epigenetic mechanisms of cellular memory. Imprinting. Combinatory control of eukaryotic genes. Regulatory genes. Establishment of cell position. Formation of the embryonic body plan. Establishment of the main axis of body. Shape formation. Cloning of multicellular organisms.							
<b>Recommended literature:</b> Gerhard,J.,Kirschener,M.: Cells, Embryos and Evolution. Blacwell Science Inc., Massachusett,Oxford,London,1997							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 386							
A	B	C	D	E	FX	N	P
36.27	21.24	11.66	15.03	8.81	5.7	0.0	1.3
<b>Provides:</b> prof. RNDr. Eva Mišúrová, CSc., RNDr. Zuzana Jendželovská, PhD.							
<b>Date of last modification:</b> 03.05.2015							
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ NZ/04	<b>Course name:</b> Non-reviewed collections of papers and monographs published abroad or in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 127	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice		
<b>Faculty:</b> Faculty of Science		
<b>Course ID:</b> KPE/ PgVU/17	<b>Course name:</b> Pedagogy for university teachers	
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 28s <b>Course method:</b> present		
<b>Number of ECTS credits:</b> 5		
<b>Recommended semester/trimester of the course:</b>		
<b>Course level:</b> III.		
<b>Prerequisites:</b>		
<b>Conditions for course completion:</b>		
<b>Learning outcomes:</b>		
<b>Brief outline of the course:</b>		
<b>Recommended literature:</b>		
<b>Course language:</b>		
<b>Notes:</b>		
<b>Course assessment</b> Total number of assessed students: 32		
abs	n	neabs
100.0	0.0	0.0
<b>Provides:</b> PaedDr. Renáta Orosová, PhD.		
<b>Date of last modification:</b> 12.02.2021		
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.		

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/RZ/04	<b>Course name:</b> Peer-reviewed collections of papers and monographs published abroad or in the country of residence
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 293	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ BTR1/06		<b>Course name:</b> Plant Biotechnology					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 3 <b>Per study period:</b> 28 / 42 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 6							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> I., II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Active participation at the practicals, protocols, oral examination							
<b>Learning outcomes:</b> To gain theoretical and practical knowledge on plant tissue culture in vitro.							
<b>Brief outline of the course:</b> Definition and history of plant biotechnology. Aseptic techniques, culture conditions. Micropropagation, types of plant explant cultures used in biotechnology. Somatic hybridization and embryogenesis, direct and indirect organogenesis. Somaclonal variation. Secondary metabolites production, bioreactors, biotransformation, immobilization and elicitation. Genetic transformation, direct and indirect methods of transformation. Types of vectors, promoters, selection markers and reporter genes used in plant transformation. Germplasm storage, gene banks. Cryopreservation and slow growth method. Genetically modified organisms - metabolic engineering, genetic engineering, plants resistant to biotic and abiotic stresses, molecular farming, the role of tissue and organ specific plant promoters, plastome engineering, plant-based edible vaccines. RNA silencing, the application of microRNAs in plant biotechnology.							
<b>Recommended literature:</b> Abdin M.Z., Kiran U., Kamaluddin M., Ali A. (eds.): Plant Biotechnology: Principles and Applications. 2017, Springer Nature Singapore Pte Ltd., Singapore Chawla H.S.: Introduction to Plant Biotechnology. 2009, third edition, Science Publisher, Enfield, USA Periodicals and Internet sources							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 167							
A	B	C	D	E	FX	N	P
40.72	18.56	13.17	8.98	10.78	2.99	0.0	4.79



<b>Provides:</b> prof. RNDr. Eva Čellárová, DrSc., RNDr. Katarína Nigutová, PhD., RNDr. Miroslava Bálintová, PhD.
<b>Date of last modification:</b> 02.02.2021
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚBEV/ GEP/12		<b>Course name:</b> Population Genetics					
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present							
<b>Number of ECTS credits:</b> 4							
<b>Recommended semester/trimester of the course:</b>							
<b>Course level:</b> II., III.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> Active participation in seminars, Written exam.							
<b>Learning outcomes:</b> Acquire knowledge about genetic interactions in population. Describe the theoretical and historical ground of population genetics. Identify, characterize and compare fundamental mechanisms (mutation, selection, migration, genetic drift). Interactions leading to intra- and interpopulation variability in population structure. Genetic diversity analysis.							
<b>Brief outline of the course:</b> Factors affecting populations. Genetic variability in populations. Polymorphism, heterozygosity. Fundamental models in population genetics. Hardy-Weinberg theorem for 2, 3 and n alleles. Special cases of random mating (Bruce's genotype ratios, Sex-linked genes). Population genetics and mutations. Assortative mating, calculation and interpretation of inbreeding coefficient. Genetic drift, fixation/elimination of alleles in small populations. One-way, two-way migration. Natural selection in haploid and diploid populations. Populations of plants, animals and human. Darwin's evolution theory, molecular evolution.							
<b>Recommended literature:</b> HALLIBURTON. R. (2004): Introduction to Population Genetics. Pearson Prentice Hall. HARTL, D. L. and CLARK, A. G. (2007): Principles of Population Genetics. 4th ed. Sinauer. RELICHOVÁ, J. (2001): Genetika populací. Masarykova univerzita Brno. Hedrick, P.W.: Genetics of Populations. Jones and Bartlett Publishers 2000.							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 1150							
A	B	C	D	E	FX	N	P
19.74	14.78	15.04	15.91	20.7	13.13	0.0	0.7
<b>Provides:</b> RNDr. Linda Petijová, PhD., RNDr. Katarína Bruňáková, PhD.							

<b>Date of last modification:</b> 04.02.2021
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/PsVU/17	<b>Course name:</b> Psychology for University Lecturers
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 28s <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Case study, micro-output, its analysis Current modifications of the course for the semester 2020/2021 are listed in the electronic bulletin board of the course.	
<b>Learning outcomes:</b> Acquisition of psychological skills necessary for professional, competent performance of university teaching practice of doctoral students on the basis of acquisition and use of selected psychological knowledge from cognitive psychology, psychology of emotions and motivation, personality psychology, developmental, social, pedagogical psychology and health psychology. They will enable university teachers - doctoral students to understand the psychological interpretation of human development, upbringing and education. The acquired knowledge will enable better application in practice, are closely linked to practice and are based on current knowledge of the field.	
<b>Brief outline of the course:</b> University teacher and his work in the teaching process with a focus on: teacher in relation to himself (cognitive, personality, social competencies and competencies in the use of methods), in relation to students and as part of the teacher-student relationship based on 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.	
<b>Recommended literature:</b> 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 psychologie pro pedagogy. Praha: Karolínium 2005.	
<b>Course language:</b>	

<b>Notes:</b>		
<b>Course assessment</b>		
Total number of assessed students: 27		
abs	n	neabs
100.0	0.0	0.0
<b>Provides:</b> Mgr. Marta Dobrowolska Kulanová, PhD., doc. PhDr. Beata Gajdošová, PhD., PhDr. Anna Janovská, PhD.		
<b>Date of last modification:</b> 17.02.2021		
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.		

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ ZSP/04	<b>Course name:</b> Realisation of study/research stay abroad
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 6., 8.	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 101	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/IG/04	<b>Course name:</b> Receiving a grant under Internal Scientific Grant System (VVGS)
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 10	
<b>Recommended semester/trimester of the course:</b> 6., 8.	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 156	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ VPBB/11	<b>Course name:</b> Review of a Bachelor Thesis
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 19	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/SSOL/04	<b>Course name:</b> Samostatné štúdium odbornej literatúry
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 251	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> Dek. PF UPJŠ/JSD/14	<b>Course name:</b> Spring School for PhD Students
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 4d <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 154	
abs	n
100.0	0.0
<b>Provides:</b> prof. RNDr. Katarína Cechlárová, DrSc.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ VPSV/04	<b>Course name:</b> Supervision of Student's Scientific Activity
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 6	
<b>Recommended semester/trimester of the course:</b> 6., 8.	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 19	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/VYS/04	<b>Course name:</b> Talk given at scholar seminars of department or institute
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 244	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ PPC/04	<b>Course name:</b> Teaching activities
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 492	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ PPC/04	<b>Course name:</b> Teaching activities
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 492	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ POVK/04	<b>Course name:</b> Work in Organizing Committee of Conference
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 49	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ PDS/18	<b>Course name:</b> Writing Dissertation Work
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 0	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 11	
N	P
0.0	100.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚBEV/ PDS/14	<b>Course name:</b> Writing Dissertation Work
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 0	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> III.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 38	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b> prof. RNDr. Eva Čellárová, DrSc.	