

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJAKA/07	Course name: Academic English
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: combined, present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., N	
Prerequisites:	
Conditions for course completion: kontrolný písomný test, aktivita na hodine záverečný písomný test miniprezentácie na dané témy povolené max. 2 absencie stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 a menej aktivita na hodine predmet končí hodnotením	
Learning outcomes: Osvojenie si a rozvíjanie užitočných techník akademického písomného ako aj ústneho prejavu so zameraním na rozvoj jazykových kompetencií študenta, na upevňovanie a rozvíjanie všetkých jazykových zručností na stredne pokročilej úrovni ovládania jazyka (B2) podľa Spoločného európskeho referenčného rámca pre jazyky). Predmet kladie dôraz na používanie angličtiny v akademickom prostredí.	
Brief outline of the course: Akademická angličtina a jej charakteristiky Čítanie odborných článkov, analýza, parafrázovanie Spájacie slová v akademickom písaní Formálna a neformálna angličtina a ich črty Vyjadrovanie príčiny, následku v akademickom jazyku Čítanie odbornej publikácie, analýza, parafrázovanie Slovo tvorba v anglickom jazyku- predpony a prípony Ako prezentovať v angličtine Parafrázovanie a definovanie Ako písať abstrakt Slovosled v akademickom diškurze	
Recommended literature: Seal B.: Academic Encounters, CUP, 2002 T. Armer :Cambridge English for Scientists, CUP 2011 M. McCarthy M., O'Dell F. - Academic Vocabulary in Use, CUP 2008	

Zemach, D.E, Rumisek, L.A: Academic Writing, Macmillan 2005 Olsen, A. : Active Vocabulary, Pearson, 2013 www.bbclearningenglish.com Cambridge Academic Content Dictionary, CUP, 2009					
Course language:					
Notes:					
Course assessment Total number of assessed students: 295					
A	B	C	D	E	FX
28.81	22.37	16.27	11.53	8.14	12.88
Provides: PaedDr. Gabriela Bednáriková					
Date of last modification: 06.09.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ ATC/10		Course name: Algebra and number theory			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚMV/ALG2b/10					
Conditions for course completion: It is based on the results of written checks carried out during the semester. Final evaluation is based on the results of written checks carried out during the semester, of test, written and oral exam.					
Learning outcomes: Obtain basic knowledge about groups and from the elementary number theory.					
Brief outline of the course: Groups, subgroups, quotient groups, homomorphism theorems for groups, selected topics of the number theory.					
Recommended literature: G.Birkoff, S.Mac Lane: A Survey of Modern Algebra, New York 1965 I.R. Shafarevich: Basic Notions of Algebra, Springer, 2005					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 113					
A	B	C	D	E	FX
10.62	17.7	27.43	22.12	16.81	5.31
Provides: doc. RNDr. Matúš Harminec, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ ALGa/10		Course name: Algebra I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 3 Per study period: 42 / 42 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: According to the results from the semester and in view of the results of the written and oral final exam..					
Learning outcomes: To obtain basic knowledge from number theory concerning divisibility and from linear algebra concerning systems of linear equations. To be able to apply it in concrete exercises.					
Brief outline of the course: Divisibility in $\mathbb{Z}$. Fields. Systems of linear equations, Gauss elimination. Maps, permutations. Computing with matrices. Determinants, Cramer rule.					
Recommended literature: T.S Blyth, E.F. Robertson: Basic linear algebra, Springer Verlag, 2001. K. Jänich: Linear algebra, Springer Verlag, 1991.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 1250					
A	B	C	D	E	FX
10.8	11.12	17.6	17.76	29.68	13.04
Provides: prof. RNDr. Danica Studenovská, CSc., RNDr. Igor Fabrici, Dr. rer. nat., Mgr. Martina Sabová, RNDr. Miroslava Černegová, Mgr. Jana Chudá, RNDr. Anna Mišková					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ ALG2b/10		Course name: Algebra II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 2 Per study period: 56 / 28 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚMV/ALGa/10					
Conditions for course completion: According to tests and to the exam.					
Learning outcomes: To obtain basic knowledge on matrices, linear spaces, linear transformations and polynomials and their roots over a field; to be able to apply the theory in concrete excercises.					
Brief outline of the course: Linear spaces, bases. Rank of a matrix. Systems of homogeneous linear equations. Linear transformations. Ring, fields. Polynomials over a field. Factorization into irreducible factors, roots. Roots of complex numbers. Cubic equations. Polynomials with several unknowns, symmetric polynomials.					
Recommended literature: A. Kurosh: Higher Algebra, Mir Publishers, 1975.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 478					
A	B	C	D	E	FX
12.76	11.92	17.36	18.2	29.08	10.67
Provides: prof. RNDr. Danica Studenovská, CSc., doc. RNDr. Matúš Harminc, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ ALP/06		Course name: Alternative Education			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 65					
A	B	C	D	E	FX
78.46	18.46	0.0	1.54	0.0	1.54
Provides: PaedDr. Renáta Orosová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ FZ1/10		Course name: Animal Physiology			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 3 Per study period: 42 / 42 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚBEV/HIS1/03 or ÚBEV/HISE1/04 or ÚBEV/HIS1/15 or ÚBEV/HISE1/15					
Conditions for course completion: Written testing from practicals and oral examination					
Learning outcomes: To provide students with basic knowledge about physiological processes in organisms of animals and man.					
Brief outline of the course: The physiology of blood and hemopoietic organs. Physiology of respiration. Heart and circulatory physiology. Physiology of the gastrointestinal tract. The functions of liver. Energetic metabolism and physiology of nutrition. Water and mineral household of the organism. Physiology of the endocrine secretion. Physiology of reproduction. Physiology of excretion. General neurophysiology. Functions of neurons and neuronal networks. Sensory and motoric functions of CNS. Associative functions of CNS. Functions of the vegetative nervous system. Physiology of muscle contraction and active motion. Work physiology. Sensory physiology					
Recommended literature: Ganong, W. F.: Review of medical physiology. Prentice-Hall, Appleton & Langer, 1993 Varder, A. J., Sherman, J. H., Luciano, D. S.: The mechanisms of body functions, McGraw-Hill, 1990 Schmidt, R. F., Thews, G.: Human Physiology, Springer-Verlag, 1989 R.W.Hill, R.Wyse, M.Anderson : Animal Physiology, Sinauer Assoc., 2008					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1029					
A	B	C	D	E	FX
8.45	14.09	21.38	25.17	23.91	7.0

Provides: doc. RNDr. Monika Kassayová, CSc., prof. RNDr. Beňadik Šmajda, CSc., doc. RNDr. Bianka Bojková, PhD., RNDr. Vlasta Demečková, PhD., RNDr. Peter Orendáš, PhD., RNDr. Terézia Kisková, PhD., Mgr. Adriana Hižňanová

Date of last modification: 03.05.2015
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Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ AFJ1a/15		Course name: Automata and formal languages			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion: Oral examination.					
Learning outcomes: To provide theoretical background for studying computer science in general, by giving the necessary knowledge in theory of automata.					
Brief outline of the course: Chomsky hierarchy of grammars and languages. Finite-state transducers and mapping, construction of a reduced automaton. Finite-state acceptors, nondeterministic acceptors, regular expressions. Closure properties of regular languages. Context-free grammars, Chomsky and Greibach normal forms. Pushdown automata, Pumping lemma. Closure properties of context-free languages.					
Recommended literature: J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2001. J. Shallit: A second course in formal languages and automata theory, Cambridge University press, 2009. M. Sipser: Introduction to the theory of computation, Thomson Course Technology, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 741					
A	B	C	D	E	FX
22.94	17.95	24.29	19.03	10.53	5.26
Provides: Mgr. Alexander Szabari, PhD., prof. RNDr. Viliam Geffert, DrSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ BKP/14	Course name: Bachelor Project
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Submission of the bachelor project, the defense of the project and acceptance of its content by the supervisor.	
Learning outcomes:	
Brief outline of the course:	
Recommended literature: 1. Scientific papers related to the topic of the bachelor project. 2. Directive No. 1/2011 of the rector UPJS in Košice.	
Course language:	
Notes:	
Course assessment Total number of assessed students: 20	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ BKP2/14	Course name: Bachelor Project
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 1 Per study period: 14 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I.	
Prerequisites:	
Conditions for course completion: To prepare and present a contribution related to thesis and its topic.	
Learning outcomes: To get students familiar with basic knowledge on the form and content of thesis and thesis presentation as well as with the support for its realisation.	
Brief outline of the course: Necessary elements and formal aspects of a thesis. WYSIWYG editors, LaTeX, drawing programs. Presentation software, Microsoft PowerPoint and its clones, Beamer. Suggestions for presentation and contribution making.	
Recommended literature: electronic information sources	
Course language: Slovak or English	
Notes:	
Course assessment Total number of assessed students: 93	
abs	n
100.0	0.0
Provides: doc. RNDr. Dušan Šveda, CSc.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ BPO/14		Course name: Bachelor thesis and its defence			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion: Acquiring the required number of credits in the structure defined by the study plan.					
Learning outcomes: Evaluation of student's competences with respect to the profile of the graduate.					
Brief outline of the course: Presentation of results of the bachelor thesis, answering the questions of the thesis supervisor and answering the questions of members of evaluation committee.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 18					
A	B	C	D	E	FX
61.11	27.78	5.56	0.0	5.56	0.0
Provides:					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/BPO/14		Course name: Bachelor Thesis and its Defence			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: ((ÚBEV/CYT1/02 or ÚBEV/CYT1/15) and ÚBEV/GE1/10 and (ÚBEV/MOB1/03 or ÚBEV/MOB1/15)) or (ÚBEV/FZ1/10 and (ÚBEV/HIS1/03 or ÚBEV/HIS1/15) and (ÚBEV/ZO1/03 or ÚBEV/ZO1/15) and (ÚBEV/ZOO1/03 or ÚBEV/ZOO1/15)) or ((ÚBEV/BO1/03 or ÚBEV/BO1/15) and (ÚBEV/BOT1/03 or ÚBEV/BOT1/15) and ÚBEV/FR1/10)					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 38					
A	B	C	D	E	FX
50.0	18.42	26.32	2.63	2.63	0.0
Provides:					
Date of last modification: 02.12.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ ZAC2/10	Course name: Basic Chemistry
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 6	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisites:	
Conditions for course completion: inorganic part: one test in 6th week; 50 points. organic part: one test in 12th week; 50 points. At least 50% of points required from both. Terminal examination by written form, 100 points; 50 points from inorganic part and 50 points from organic parts.	
Learning outcomes: The main goal of this subject is to provide a basic overview of inorganic and organic chemistry for biology students.	
Brief outline of the course: Introduction to general and inorganic chemistry. Periodic systems of elements. Atomic structure. Chemical bonds. Relationship between structure and properties of substances. Solutions. Transition and non transition elements and their compounds. Coordination and biocoordination compounds. Elements essential for living organisms and their function. Biometals. Biominerals. Introduction to organic chemistry. Saturated and unsaturated hydrocarbons and their derivatives. Heterocyclic compounds. Carbohydrates. Lipids. Aminoacids and proteins. Enzyms and vitamins. Nucleic acids. Metabolism and energy.	
Recommended literature: 1. Caret C. R., Denniston K.J., Topping J. J.: Principles and Applications of Inorganic, Organic and Biological Chemistry. WCB, Boston 1997. 2. R.Chang: Chemistry, McGRAW-HILL,Inc., New York 1991. 3. K. C. Timberlake: Organic and Biological Chemistry, Structure of Life. Benjamin Cummings Publishing Company, Inc., San Francisco 2002.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 1001					
A	B	C	D	E	FX
19.88	26.07	25.97	17.38	10.09	0.6
Provides: doc. RNDr. Zuzana Vargová, Ph.D., RNDr. Mária Vilková, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ BBIO/03		Course name: Biology			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 0					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: ÚBEV/FZ1/10 and ÚBEV/FR1/10 and ÚBEV/GE1/10					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 348					
A	B	C	D	E	FX
19.25	22.7	21.55	18.68	14.94	2.87
Provides:					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ BSB/15		Course name: Biology			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 1					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 34					
A	B	C	D	E	FX
26.47	26.47	23.53	8.82	11.76	2.94
Provides:					
Date of last modification: 22.02.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ BDD/05		Course name: Biology of Children and Adolescents			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Written test					
Learning outcomes: The aim of the subject is to gain the particular level of knowledge about human body and its development. It is necessary for the understanding of specific biological characteristics of children and adolescents linked to development.					
Brief outline of the course: Human ontogenesis. Postnatal development. Age specific features of skeletal and muscular, circulatory, respiratory, gastrointestinal and urinary systems. Reproductive system. Endocrine system. Nervous system. Age specifics of selected diseases and drug dependence arise. Human population and environment.					
Recommended literature: Drobný I., Drobná M.: Biológia dieťaťa pre špeciálnych pedagógov I. a II. Bratislava, PdF UK, 2000 Lipková V.: Somatický a fyziologický vývoj dieťaťa. Osveta Bratislava, 1980 Malá H., Klementa J.: Biológia detí a dorastu. Bratislava, SPN, 1989					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1159					
A	B	C	D	E	FX
34.17	23.12	17.0	16.48	8.8	0.43
Provides: doc. RNDr. Monika Kassayová, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/BS1/03		Course name: Biostatistics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Recognition. Recognition.					
Learning outcomes: To provide the students with knowledge on basic principles of statistic methods used in biology and their scope of application					
Brief outline of the course: Sources and theoretical background of biostatistics. Basic principles of the probability theory. Descriptive statistics: variables, measures of mean value and variability of data. Theoretical and empirical distributions. Experimental sampling from normal distributions. Testing of hypotheses. One-way and multiple analysis of variance. Tests for multiple comparisons. Regression analysis. Correlations. Non-parametrical methods. Time series. Analysis of quantitative data.					
Recommended literature: Hassard, T. H.: Understanding biostatistics. Mosby Year Book, 1991 Snedecor, G.W., Cochran, W.G.: Statistical methods. The Iowa state university, Ames, 1972. R.Forthofer, E.S.Lee, M.Hernandez: Biostatistics. Elsevier, Amsterdam..., 2007					
Course language:					
Notes:					
Course assessment Total number of assessed students: 143					
A	B	C	D	E	FX
2.1	8.39	18.18	17.48	35.66	18.18
Provides: prof. RNDr. Beňadik Šmajda, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ BO1/15		Course name: Botany I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Introduction to biology of lower plants.					
Brief outline of the course: Morphology, cytology, ecology, evolution and taxonomy of all main groups of lower plants. Cyanobacteria and algae (Cyanophyta, Prochlorophyta, Glaucophyta, Rhodophyta, Heterocontophyta, Haptophyta, Cryptophyta, Dinophyta, Euglenophyta, Chlorarachniophyta, Chlorophyta). Slime moulds (Plasmodiophoromycota, Dictyosteliomycota, Acrasiomycota, Labyrinthulomycota). Fungi (Oomycota, Hyphochytriomycota, Chytridiomycota, Zygomycota, Ascomycota, Basidiomycota). Lichens. Bryophytes. Literature: Deacon, J.W. (1998) Modern Mycology. Blackwell Science Ltd.					
Recommended literature: Bačkor, M.: Základy systému nižších rastlín I. (sinice, riasy a slizovky). UPJŠ, Košice 2002; Deacon, J.W. (1998) Modern Mycology. Blackwell Science Ltd. Van den Hoek, C. a kol. 1995: Algae, an introduction to phycology, Záhorovská E. a kol.: Systém a evolúcia nižších rastlín. UK Bratislava 1998					
Course language:					
Notes:					
Course assessment Total number of assessed students: 146					
A	B	C	D	E	FX
30.82	14.38	22.6	17.81	10.27	4.11
Provides: prof. RNDr. Martin Bačkor, DrSc., RNDr. Michal Goga					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ BO1/03		Course name: Botany I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3., 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Introduction to biology of lower plants.					
Brief outline of the course: Morphology, cytology, ecology, evolution and taxonomy of all main groups of lower plants. Cyanobacteria and algae (Cyanophyta, Prochlorophyta, Glaucophyta, Rhodophyta, Heterocontophyta, Haptophyta, Cryptophyta, Dinophyta, Euglenophyta, Chlorarachniophyta, Chlorophyta). Slime moulds (Plasmodiophoromycota, Dictyosteliomycota, Acrasiomycota, Labyrinthulomycota). Fungi (Oomycota, Hyphochytriomycota, Chytridiomycota, Zygomycota, Ascomycota, Basidiomycota). Lichens. Bryophytes. Literature: Deacon, J.W. (1998) Modern Mycology. Blackwell Science Ltd.					
Recommended literature: Bačkor, M.: Základy systému nižších rastlín I. (sinice, riasy a slizovky). UPJŠ, Košice 2002; Deacon, J.W. (1998) Modern Mycology. Blackwell Science Ltd. Van den Hoek, C. a kol. 1995: Algae, an introduction to phycology, Záhorovská E. a kol.: Systém a evolúcia nižších rastlín. UK Bratislava 1998					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1474					
A	B	C	D	E	FX
12.82	17.91	25.31	21.17	19.88	2.92
Provides: prof. RNDr. Martin Bačkor, DrSc., RNDr. Michal Goga					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ BOT1/03	Course name: Botany II
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 2., 6.	
Course level: I., II.	
Prerequisites: ÚBEV/TCB1/03	
Conditions for course completion: Practical and theoretical exam.	
Learning outcomes: To obtain of survey in knowledge and methods in systematics of tracheophytes.	
Brief outline of the course: History and present time of plant systematics. Approaches to plant classification. Principles of cladistics and molecular taxonomy. Tracheophytes, clades of lycophytes, ferns and allies. Seed plants. Gymnosperms and their evolution: cycads, ginkgos, conifers, gnetophytes. Angiosperms. Evolution and general description. Basal clades and Magnoliid clade. Monocots. "Basal tricolpates" and Caryophyllid clade. Rosid and asterid clades of tricolpates. Practices are devoted to study of the most important families of tracheophytes. Fossil evidence of ferns and allies from Palaeozoic age. Tropical a subtropical flora. Ferns. Practical study of conifers. Selected families of angiosperms. (<i>Magnoliaceae, Araceae, Liliaceae, Amaryllidaceae, Cyperaceae, Poaceae, Ranunculaceae, Papaveraceae, Caryophyllaceae, Euphorbiaceae, Violaceae, Fabaceae, Rosaceae, Betulaceae, Brassicaceae, Boraginaceae, Plantaginaceae, Lamiaceae, Apiaceae, Asteraceae</i>). Study of other seed plants, plant identification according to key.	
Recommended literature: Mártonfi P.: Systematika cievnatých rastlín, 2. vydanie. - ES UPJŠ, Košice, 2006. Mártonfi P.: Systematika cievnatých rastlín. - ES UPJŠ, Košice, 2003. Judd W. S., Campbell Ch. S., Kellogg E. A. & Stevens P. F., Donoghue M. J.: Plant Systematics. A phylogenetic Approach, 2nd ed. - Sinauer Associates, Sunderland, 2002. Dostál J., Červenka M.: Veľký kľúč na určovanie rastlín I. a II. - SPN, Bratislava, 1991 a 1992.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 1264					
A	B	C	D	E	FX
10.28	11.87	17.09	20.09	24.45	16.22
Provides: prof. RNDr. Pavol Mártonfi, PhD., Mgr. Vladislav Kolarčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ BOT1/15	Course name: Botany II
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 4	
Recommended semester/trimester of the course: 2.	
Course level: I.	
Prerequisites: ÚBEV/TCB1/03	
Conditions for course completion: Practical and theoretical exam.	
Learning outcomes: To obtain of survey in knowledge and methods in systematics of tracheophytes.	
Brief outline of the course: History and present time of plant systematics. Approaches to plant classification. Principles of cladistics and molecular taxonomy. Tracheophytes, clades of lycophytes, ferns and allies. Seed plants. Gymnosperms and their evolution: cycads, ginkgos, conifers, gnetophytes. Angiosperms. Evolution and general description. Basal clades and Magnoliid clade. Monocots. "Basal tricolpates" and Caryophyllid clade. Rosid and asterid clades of tricolpates. Practices are devoted to study of the most important families of tracheophytes. Fossil evidence of ferns and allies from Palaeozoic age. Tropical a subtropical flora. Ferns. Practical study of conifers. Selected families of angiosperms. (<i>Magnoliaceae, Araceae, Liliaceae, Amaryllidaceae, Cyperaceae, Poaceae, Ranunculaceae, Papaveraceae, Caryophyllaceae, Euphorbiaceae, Violaceae, Fabaceae, Rosaceae, Betulaceae, Brassicaceae, Boraginaceae, Plantaginaceae, Lamiaceae, Apiaceae, Asteraceae</i>). Study of other seed plants, plant identification according to key.	
Recommended literature: Mártonfi P.: Systematika cievnatých rastlín, 2. vydanie. - ES UPJŠ, Košice, 2006. Mártonfi P.: Systematika cievnatých rastlín. - ES UPJŠ, Košice, 2003. Judd W. S., Campbell Ch. S., Kellogg E. A. & Stevens P. F., Donoghue M. J.: Plant Systematics. A phylogenetic Approach, 2nd ed. - Sinauer Associates, Sunderland, 2002. Dostál J., Červenka M.: Veľký kľúč na určovanie rastlín I. a II. - SPN, Bratislava, 1991 a 1992.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 173					
A	B	C	D	E	FX
15.61	14.45	23.12	19.08	15.61	12.14
Provides: prof. RNDr. Pavol Mártonfi, PhD., Mgr. Vladislav Kolarčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ ZBR/14	Course name: Bridge Fundamentals
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Active participation on exercises.	
Learning outcomes: A student gets acquainted with fundamentals of the contract bridge, develops his/her logical thinking and consolidates his/her habits of positive social behaviour.	
Brief outline of the course: Bridge rules. Principles of the bidding system Standard American. Basic techniques of declarer's play. Basic techniques of the defence. Lead conventions, signals. Common bidding conventions. Selected advanced techniques of the card play. Partnership cooperation in the contract bridge. Bridge ethics.	
Recommended literature: T. Menyhért: Kurz bridžu 2013, http://new.bridgekosice.sk/kurz-bridzu-2013/ R. Pavlicek: Learn To Play Bridge!, http://www.rpbridge.net/1a00.htm ACBL SAYC System Booklet, http://ebookbrowse.net/acbl-sayc-pdf-d201415187	
Course language: Slovak or English	
Notes: Minimum number of participants is 4.	
Course assessment Total number of assessed students: 13	
abs	n
92.31	7.69

Provides: doc. RNDr. Miroslav Ploščica, CSc., prof. RNDr. Mirko Horňák, CSc.
Date of last modification: 03.05.2015
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: KOP/OPaPDV/14	Course name: Civil Law and Intellectual Property Rights
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 credits: 4	
Recommended semester/trimester of the course: 3., 5.	
Course level: I., N	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 21	
abs	n
85.71	14.29
Provides: JUDr. Renáta Bačárová, PhD., LL.M.	
Date of last modification: 06.06.2016	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJKKA/07	Course name: Communicative Competence in English
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: combined, present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., N	
Prerequisites:	
Conditions for course completion: Active participation in class and completed homework assignments. Students are allowed to miss two classes at the most. Continuous assessment: 2 credit tests (presumably in weeks 6 and 13) and academic presentation in English. Test 1 = 40 points, test 2 = 40 points, presentation = 20 points. In order to pass the course, it is necessary to score at least 65 points as a sum of test and presentation scores. Final grade will be calculated as follows: A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64 % and less	
Learning outcomes: Uplatnenie a aktívne používanie svojich teoretických vedomostí v praktických komunikačných situáciách. Zdokonalenie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a vecnej kompetencie, predovšetkým zlepšujú komunikáciu, schopnosť prijímať a formulovať výpovede, efektívne vyjadrovať svoje myšlienky ako aj orientovať sa v obsahovom pláne výpovede. Precvičovanie rečových intencií kontaktných (napr. pozdravy, oslovenia, pozvanie, oslovenie), informatívnych (napr. získavanie a podávanie informácií, vyjadrenie priestorových a časových vzťahov), regulačných (napr. prosba, poďakovanie, zákaz, pochvala, súhlas, nesúhlas) a hodnotiacich (napr. vyjadrenie vlastného názoru, stanoviska, želania, emócií). Výsledkom budovania praktickej jazykovej kompetencie majú byť vedomosti a zručnosti zodpovedajúce požiadavkám a kritériám dokumentu Spoločný európsky referenčný rámec pre vyučovanie jazykov - úroveň B2.	
Brief outline of the course: Rodina, jej formy a problémy Vyjadrovanie pocitov a dojmov Dom, bývanie a budúcnosť Formy a dialekty v anglickom jazyku Život v meste a na vidieku Kolokácie a idiomy, zaužívané slovné spojenia Prázdniny a sviatky vo svete	

Životné prostredie a ekológia Výnimky zo slovosledu Frázové slovesá a ich použitie Charakteristiky neformálneho diškurzu					
Recommended literature: McCarthy M., O'Dell F.: English Vocabulary in Use, 1994 Misztal M.: Thematic Vocabulary, 1998 Fictumova J., Ceccarelli J., Long T.: Angličtina, konverzace pro pokročilé, Barrister and Principal, 2008 Peters S., Gráf T.: Time to practise, Polyglot, 2007 www.bbclearningenglish.com Jones L.: Communicative Grammar Practice, CUP, 1985 Alexander L.G.: Longman English Grammar, Longman, 1988					
Course language:					
Notes:					
Course assessment Total number of assessed students: 191					
A	B	C	D	E	FX
38.22	21.99	18.85	9.42	7.33	4.19
Provides: Mgr. Zuzana Naďová					
Date of last modification: 01.09.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/ NJKK/07		Course name: Communicative Competence in German Language			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 44					
A	B	C	D	E	FX
59.09	13.64	6.82	4.55	13.64	2.27
Provides: Mgr. Eva Černáková, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJGA/07	Course name: Communicative Grammar in English
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: combined, present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II., N	
Prerequisites:	
Conditions for course completion: kontrolná písomná práca, záverečná písomná práca stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 65-71, 64 a menej - FX aktivita na hodinách, povolené 2 absencie predmet je ukončený hodnotením	
Learning outcomes: Identifikovanie a odstránenie najfrekvencovanejších gramatických chýb v ústnom prejave, ako aj v písomnom styku. Rozvoj jazykových kompetencií študenta so zameraním na funkcie gramatiky anglického jazyka v každodennej interakcii, v komunikačnom akte na stredne pokročilej úrovni ovládania jazyka (B2 podľa Spoločného európskeho referenčného rámca pre jazyky).	
Brief outline of the course: Zvieratá a rastliny na zemi Zločin a trest Cestovanie po mori a vzduchom Jedlá a reštaurácie, národná kuchyňa Vzdelanie na vysokých školách História a viera Vybrané problémy anglickej výslovnosti, gramatiky (nepriama reč, slovotvorba, predložkové väzby, anglická syntax, kondicionály v angličtine a slovnej zásoby príslušného zamerania Vybrané funkcie praktického odborného jazyka potrebné na prácu s odborným textom	
Recommended literature: Misztal M.: Thematic Vocabulary, 1994 McCarthy, O'Dell: English Vocabulary in Use, 1994 Alexander L.G.: Longman English Grammar, Longman, 1988 Jones I. - Communicative Grammar Practice, CUP, 1992 Vince M.: Macmillan Grammar in Context, Macmillan, 2008 www.bbclearningenglish.com Gráf T., Peters S.: Time to practise, Polyglot, 2007	

Course language:					
Notes:					
Course assessment					
Total number of assessed students: 378					
A	B	C	D	E	FX
39.42	18.25	17.2	8.73	5.82	10.58
Provides: PaedDr. Gabriela Bednáriková					
Date of last modification: 06.09.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/ NJKG/07		Course name: Communicative Grammar in German Language			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 46					
A	B	C	D	E	FX
54.35	13.04	8.7	4.35	10.87	8.7
Provides: PaedDr. Ingrid Puchalová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ PMZ/10		Course name: Comparative Animal Morphology			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Lectures and practical exercises, original drawing of some parts of animal body or it derivatives, examination.					
Learning outcomes:					
Brief outline of the course:					
Recommended literature: Kardong, K. V., 2002: Vertebrates. Comparative anatomy, function, evolution. 3rd ed., Mc-Graw-Hill, New York. Pough, F. H., Janis, Ch. M., Heiser, J. B., 2008: Vertebrate Life. Prentice Hall, Inc., 752 pp. 8th edition. Ruppert, E. E., Fox, R. S., & Barnes, R. D., 2004: Invertebrate zoology: a functional evolutionary approach. Belmont, CA: Thomas-Brooks/Cole.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1469					
A	B	C	D	E	FX
14.09	17.22	24.98	23.55	14.09	6.06
Provides: RNDr. Andrej Mock, PhD., RNDr. Alexander Čanády, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ CYT1/15		Course name: Cytology			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Oral examination					
Learning outcomes: To provide the students with knowledge of basic principles of cell microscopic and submicroscopic structure and function.					
Brief outline of the course: Levels of living system organization. Characteristics and comparison of prokaryotic and eukaryotic plant and animal cells. Microscopic, submicroscopic and molecular structure and function of individual cell components. Nucleus and cell division.					
Recommended literature: Alberts, B., Bray, D., Lewis, J. et al.: Molecular Biology of the Cell. Garland Publishing Inc., New York, London, 1994					
Course language:					
Notes:					
Course assessment Total number of assessed students: 3277					
A	B	C	D	E	FX
5.55	14.95	23.89	23.31	27.1	5.19
Provides: RNDr. Rastislav Jendželovský, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ DSMa/10		Course name: Discrete mathematics I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Examination.					
Learning outcomes: To be familiar with some factual knowledge of combinatorics and graph theory. To understand and appreciate mathematical notions, definitions, and proofs, to solve problems requiring more than just standard recipes, and to express mathematical thoughts precisely and more rigorously.					
Brief outline of the course: Basic principles. Counting and binomial coefficients, Binomial theorem, polynomial theorem. Recurrence: Some miscellaneous problems, Fibonacci-type relations, Using generating functions, miscellaneous methods. The inclusion-exclusion principle. Rook polynomials. Introduction to graphs: The concept of graphs, paths in graphs. Connectivity. Trees, bipartite graphs. Planarity. Polyhedra. Traveling round a graph: Eulerian graphs, Hamiltonian graphs. Partitions and colourings: Vertex colourings of graphs. Edge colourings of graphs					
Recommended literature: 1. I. Anderson, A first course in discrete mathematics, Springer-Verlag London, 2001. 2. J. Matoušek and J. Nešetřil, Invitation to discrete mathematics, Oxford University Press Inc. , New York 1999.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 515					
A	B	C	D	E	FX
12.82	10.87	17.28	22.72	27.57	8.74

Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Mária Maceková, PhD., Mgr. Juraj Valiska
Date of last modification: 03.05.2015
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DSMb/10	Course name: Discrete mathematics II
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: I.	
Prerequisites: ÚMV/DSMa/10 or ÚMV/DSM3a/10	
Conditions for course completion: Two tests during the semester It is made on the base of results of two tests during the semester (50%) and a final written exam and an oral exam (50%)	
Learning outcomes: Mastered fundamental methods of graph theory. To be familiar with some possibilities of applications of graph theory	
Brief outline of the course: Introduction to graphs. Connectivity and distance in graphs. Trees, spanning subgraphs Independence and coverings. Introduction to the Ramsey theory. Introduction to the extremal graph theory. Matchings: Theorem of Hall, theorem of Berge, optimal assignment problems. Vertex colorings: Theorem of Brooks, Theorem of Erdos and Szekeres. Chromatic polynomials. Edge colourings, Theorem of Koenig. Introduction to directed graphs: Basic notions, connectivities, tournaments, acyclic graphs, base and kernel of a graph. Introduction to applications of graphs.	
Recommended literature: 1. A. Bondy and U.S.R. Murty: Graph theory, Springer-Verlag 2008 2. G. Chartrand, L. Lesniak, and P. Zhang, Graphs and digraphs, CRC Press, Boca Raton 2011 3. R. Diestel: Graph Theory, Springer-Verlag, New York, Inc. 1997 4. M.N.S. Swamy and K. Thulasiraman: Graphs, Networks and Algorithms. Willey Interscience Publ., New York 1981	
Course language: Slovak	

Notes:					
Course assessment					
Total number of assessed students: 357					
A	B	C	D	E	FX
11.76	8.96	16.25	19.05	29.13	14.85
Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Michaela Vrbjarová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/PUDB/15		Course name: Drug Addiction Prevention in University Students			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 11					
A	B	C	D	E	FX
72.73	27.27	0.0	0.0	0.0	0.0
Provides: Mgr. Marianna Berinšterová, PhD., Prof. PhDr. Oľga Orosová, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚINF/EDS/15	Course name: Educational software
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 0 / 2 Per study period: 0 / 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I.	
Prerequisites:	
Conditions for course completion: 1 Preparation of interim assignments: a) Worksheet for student (with custom graphics) b) Multimedia educational presentation (with pictures, animations and sounds) c) Interactive educational quiz (with several types of quiz items) d) Methodological guidance on the use of interactive applications in teaching selected topic of chosen school subject. 2 Creation and presentation of final project on the use of educational software in education.	
Learning outcomes: 1. To acquire an overview of the educational software types and its exploitation in education. 2. To gain or enhance basic skills in working with: a) presentation software, programs for creation and editing images, animations, diagrams, sounds, concept maps, b) programs for creation of quizzes, questionnaires, voting, c) simulation and modeling software, d) selected subject-oriented educational programs, 3. To create and present a final project on the use of educational software in education.	
Brief outline of the course: Educational software types. Onlilne educational sources and tools. Multimedia processing. Tools for creation of teaching aids.	
Recommended literature: 1. Digitálna gramotnosť učiteľa : učebný materiál- modul 1 / Rastislav Adámek ... [et al.]. - Košice : Ústav informácií a prognóz školstva, 2009. - 80 s. - ISBN 9788080861193(brož.). 2. Moderná didaktická technika v práci učiteľa : učebný materiál modul 2 / Rastislav Adámek ... [et al.] ; recenzenti Viliam Fedák, Anton Lavrin. - Košice : Elfa, 2010. - 200 s. - ISBN 9788080861353 (brož.). 3. Web, Multimédia / Martin Homola ... [et al.]. - Bratislava : Štátny pedagogický ústav, 2010. - 68 s. - Č. projektu: ŠPVV ĎVUi 26120130001. - ISBN 9788081180514 (brož.).	
Course language:	

Notes:

Content of lessons will be flexibly adapted to the field of study of learners. Language learners will be able to work more with pictures and sounds, physicists with simulation programs, mathematicians with mathematical software, etc.

Course assessment

Total number of assessed students: 7

A	B	C	D	E	FX
28.57	28.57	28.57	0.0	14.29	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 03.05.2015

Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: CJP/ PFAJ4/07	Course name: English Language of Natural Science
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 4.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Active participation in class and completed homework assignments. Students are allowed to miss 2 classes at the most. Continuous assessment: 2 credit tests (presumably in weeks 6 and 13) and academic presentation in English. Test 1 = 40 points, test 2 = 40 points, presentation = 20 points. In order to be admitted to the final exam, a student has to score at least 65 points as a sum of both credit tests and academic presentation. Exam test = 100 points. The exam test results represent 50% of the final grade for the course, continuous assessment results represent the other 50% of the final grade. The final grade for the course will be calculated as follows: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 and less.	
Learning outcomes: Rozvoj jazykových kompetencií študentov príslušného študijného odboru, upevňovanie a rozvíjanie všetkých jazykových zručností (hovorenie, písanie, čítanie, počúvanie) predovšetkým v odbornej/profesnej angličtine, na stredne pokročilej úrovni ovládania jazyka (B2). Dôraz sa kladie na aktívne správne používanie odbornej/profesnej angličtiny.	
Brief outline of the course: ANGLICKÝ JAZYK PRE GEOGRAFOV: Veda a výskum. Odbor geografia. Planéta Zem. Naša slnečná sústava. Litosféra, hydrosféra, atmosféra, biosféra. Zem - dynamická planéta. Tektonické platne. Sopečná činnosť. Zemetrasenia. Svetové oceány. Morské prúdy. Tsunami. Veľký koralový útes. Atmosféra - zloženie atmosféry. Kontinenty. Európa - krajiny, národnosti. ANGLICKÝ JAZYK PRE EKOLÓGOV: Veda a výskum. Odbor ekológia.	

Životné prostredie. Znečistenie a dôsledky.
Sopečná činnosť, zemetrasenia.
Great Pacific Garbage Patch.
Globálne otepľovanie a dôsledky. Ľadovce.
Počasie a klíma. Búrky, hurikány, tsunami.
Život na Zemi. Ohrozené rastlinné a živočíšne druhy.
ANGLICKÝ JAZYK PRE BIOLÓGOV:
veda a výskum, odbor biológia
morfológia rastlín, koreň
stonka, list
rozmnožovanie rastlín, kvet
biológia človeka - telesné sústavy
slovná zásoba z oblasti botanickej a zoologickej nomenklatúry
ANGLICKÝ JAZYK PRE MATEMATIKOV:
Veda a výskum, odbor matematika
čísla a tvary v matematike
Elementárna algebra
Elementárna geometria
Výpočty v matematike
Pytagoras, Pytagorova veta
Grafy a diagramy
Štatistika
ANGLICKÝ JAZYK PRE FYZIKOV
Veda a výskum, odbor fyzika
Atómy a molekuly
Hmota a jej premeny
Elektrina, jej využitie
Zvuka, jeho prenos
Svetlo
Solárny systém
Matematické operácie
ANGLICKÝ JAZYK PRE CHEMIKOV:
Veda a výskum, odbor chémia:
História, alchímia
Nomenklatúra
Laboratórium a jeho vybavenie
Periodická tabuľka
Hmota a jej premeny
Organická chémia
Anorganická chémia
ANGLICKÝ JAZYK PRE INFORMATIKOV:
Veda a výskum, informatika
Život s počítačom
Typický PC
Zdravie a bezpečnosť, ergonómika
Programovanie
Emailovanie
Cybercrime
Trendy budúcnosti

Recommended literature:

študijné materiály dodané vyučujúcim

Velebná, V. English for Chemists.

Redman, S.: English Vocabulary in Use, Pre-intermediate, Intermediate. Cambridge University Press. 2003.

Powel, M.: Dynamic Presentations. CUP, 2010

Armer, T.: Cambridge English for Scientists. CUP, 2011

Wharton J.: Academic Encounters. The Natural World, CUP: 2009.

Murphy, R.: English Grammar in Use. Cambridge University Press. 1994.

Redman, s.: English Vocabulary in Use, Pre-intermediate, Intermediate. Cambridge University Press. 2003.

P. Fitzgerald : English for ICT studies, Garnet Publishing, 2011

Course language:**Notes:****Course assessment**

Total number of assessed students: 2010

A	B	C	D	E	FX
31.44	25.82	18.71	11.59	9.65	2.79

Provides: PaedDr. Gabriela Bednáriková, Mgr. Marianna Škultétyová, Mgr. Zuzana Naďová, PhDr. Helena Petruňová, CSc.

Date of last modification: 01.09.2016

Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ TCZ/03	Course name: Fieldwork from zoology
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 5d Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 4., 6.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes: Practical observation of morphology of vertebrates.	
Brief outline of the course: Systematic and phylogenetic relationships of vertebrate. Review of important groups of fishes, amphibians, reptiles, birds and mammals - observation, and laboratory work.	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 561	
abs	n
99.11	0.89
Provides: RNDr. Peter Ľuptáčík, PhD., doc. RNDr. Ľubomír Panigaj, CSc., RNDr. Andrej Mock, PhD., RNDr. Marcel Uhrin, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ TCB1/03	Course name: Fieldworks from Botany
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 5d Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 2., 6.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes: Study of methods for identification and determination of common central-europaeen plants.	
Brief outline of the course: Plant identification in different habitats. Plant determination. Floristic records.	
Recommended literature: Dostál J., Červenka M.: Veľký kľúč na určovanie rastlín I. a II. - Veda, Bratislava 1991 a 1992. Kubát K. (ed.): Kľíč ke květeně České republiky. - Academia, Praha, 2002. Marhold K. a Hindák F. (eds.): Zoznam nižších a vyšších rastlín Slovenska. Checklist of non-vascular and vascular plants of Slovakia. - Veda, Bratislava 1998. Krejča J. (ilustr.): Veľká kniha rastlín. - Bratislava (various editions).	
Course language:	
Notes:	
Course assessment Total number of assessed students: 820	
abs	n
99.88	0.12
Provides: prof. RNDr. Pavol Mártonfi, PhD., prof. RNDr. Martin Bačkor, DrSc., Mgr. Vladislav Kolarčík, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ VB1/01		Course name: General botany			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚBEV/CYT1/02 or ÚBEV/CYT1/15					
Conditions for course completion:					
Learning outcomes: This subject enables to understand the structure and function of plant cells, tissues and organs and to enhance student's ability to describe the biological role of plants for life on earth.					
Brief outline of the course: The structure and function of plant cells and tissues. Plant organs, their structure, function, shape and organization. Plant reproduction and grounding in embryology. Basic information and terms that are necessary for understanding of relationship between internal structure and functions of organs and functions plant organism en bloc.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1506					
A	B	C	D	E	FX
20.19	20.78	26.69	18.13	10.03	4.18
Provides: prof. RNDr. Pavol Mártonfi, PhD., Mgr. Vladislav Kolarčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ GE1/10		Course name: Genetics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 3 Per study period: 42 / 42 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚBEV/MB1/01 or ÚBEV/MOB1/03 or ÚBEV/MOB1/15					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1056					
A	B	C	D	E	FX
18.09	17.23	15.81	13.54	18.18	17.14
Provides: prof. RNDr. Eva Čellárová, DrSc., RNDr. Miroslav Soták, PhD., RNDr. Katarína Bruňáková, PhD., RNDr. Miroslava Bálintová, Mgr. Zuzana Jurčacková, RNDr. Odeta Czeranková, RNDr. Jana Henzelyová, RNDr. Diana Kopcsayová					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ GEO2a/15	Course name: Geometry I
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 6.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Two written tests. Written and oral examinations For continuous evaluation - max. 40 points for the written test - max. 20 points for oral exams - max. 40 points) Final score: A: 100-91 points, B: 90-81, C: 80-71, D: 70-61, E: 60-51, F: less than 51 points Note: In each of the student needs to have at least 40% max. number of points	
Learning outcomes: To acquaint students with the analytical geometry of linear and quadratic figures in Affine and Euclidean space.	
Brief outline of the course: Affine n-dimensional space - definition. Linear coordinate system. Subspaces, the parametric and non-parametric representation. The relative position of the two subspaces. Bundles of lines. The arrangement of points on the line. Convex sets. Changing the system of linear coordinates. Euclidean space - definition of (scalar and outer product). Euclidean distances and deviations subspaces. The rate of the size of convex sets. Triangle and trigonometric theorems. Conic and line.	
Recommended literature: 1. M.Sekanina, L.Boček, M.Kočandrle, J.Šedivý: Geometrie 1, SPN Praha 1986 2. M.Hejný, V.Zaťko, P.Kršňák: Geometria 1, SPN Bratislava 1985 3. J.Eliaš, J.Horváth, J.Kajan: Zbierka úloh z vyššej matematiky 1, Alfa Bratislava	

4. M.Trenkler: Materiály uvedené na Internetě.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 88					
A	B	C	D	E	FX
17.05	12.5	21.59	18.18	19.32	11.36
Provides: doc. RNDr. Dušan Šveda, CSc., Mgr. Lucia Janičková					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/HISE1/15		Course name: Histology			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚBEV/CYT1/02 or ÚBEV/CYT1/15					
Conditions for course completion: Oral examination					
Learning outcomes: To provide the students with knowledge of basic morphology of tissues of animals.					
Brief outline of the course: Epithelium and glands. Connective tissue. Cartilage. Bone. Muscle. Nervous Tissue. Blood and hemopoiesis. Circulatory system. Lymphoid system. Endocrine system. Integument. Respiratory system. Digestive system. Urinary system. Female reproductive system. Male reproductive system. Nervous system. Special senses.					
Recommended literature: Gartner, L.P., Hiatt, J.L.: Color Textbook of Histology. W.B. Saunders Company, Philadelphia, 1997 Juanqueira, L.C., Carneiro, J., Kelley, R.O.: Basic Histology. Prentice Hall International Inc., Apleton & Lange, 1992					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1558					
A	B	C	D	E	FX
17.59	12.84	14.83	12.58	26.32	15.85
Provides: doc. RNDr. Zuzana Daxnerová, CSc., RNDr. Juraj Ševc, PhD., RNDr. Anna Alexovič Matiašová, PhD., MVDr. Ľubomír Čulka					
Date of last modification: 11.01.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/DF2p/03		Course name: History of Philosophy 2 (General Introduction)			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 6.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 731					
A	B	C	D	E	FX
60.6	13.82	12.72	8.76	3.42	0.68
Provides: doc. PhDr. Pavol Tholt, PhD., mim. prof., Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., Mgr. Róbert Stojka, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ ACL/03		Course name: Human Anatomy			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Written examination					
Learning outcomes: Anatomic systems of man.					
Brief outline of the course: Anatomic terminology, skeleton and muscles, gastrointestinal system, respiratory system, circulatory and lymphatic system, urogenital system, sensory organs, nervous system, ontogenesis of man.					
Recommended literature: Kahle, W., Leonhardt, H., Platzer, W. : Color Atlas and Textbook of Human Anatomy in 3 Volumes : Volume 1 : Locomotor System, Volume 2: Internal Organs and Volume 3: Nervous System and Sensory Organs Thieme Medical Publishers, Inc. New York, 1993 Anne M. R. Agur : Grant's atlas of anatomy. Williams et Wilkins, USA, 1991					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1405					
A	B	C	D	E	FX
4.27	16.94	28.9	25.98	21.49	2.42
Provides: MVDr. Diana Kúkeľová, RNDr. Diana Pacáková, RNDr. Juraj Ševc, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/ IB10/14	Course name: IB10 - Medzinárodný certifikát ECo-C	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/ IB11/14	Course name: IB11 - Medzinárodný certifikát ECDL	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 14		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB12/14	Course name: IB12 - Používanie, administrácia a vývoj v systéme SAP	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 54		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB1/14	Course name: IB1 - Etika v biomedicínskych vedách pre zdravotnícku prax	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB2/14	Course name: IB2 - Právne minimum – súkromnoprávne aspekty	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB3/14	Course name: IB3 - Právne minimum – verejnoprávne aspekty	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/ IB4/14	Course name: IB4 - Projektový manažment	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 20		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB5/14	Course name: IB5 - Manažérska ekonomika	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/ IB6/14	Course name: IB6 - Riešenie konfliktných a krízových situácií v školskej praxi	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB7/14	Course name: IB7 - Statistics for Practice	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB8/14	Course name: IB8 - Environmentálne aspekty záťaže životného prostredia	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 16		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/IB9/14	Course name: IB9 - Medzinárodný certifikát TOEFL	
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of credits: 17		
Recommended semester/trimester of the course:		
Course level: I., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification:		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ IPU/10		Course name: Informatics course for teachers of mathematics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Elaborating test by using a computer. Solving problems of worksheet and elaboration of seminar work.					
Learning outcomes: To develop the students' knowledge and skills in the basics of working with standard ICT, which provide opportunities for their use in mathematics education. To teach students to use the basic commands of Logo language for writing and generalization algorithms for constructing geometric shapes and basic principles of creation of constructions in the environment of dynamic geometry. To develop creative and evaluative students' ability to allow meaningful integration of modern technologies in mathematics education.					
Brief outline of the course: Basics of development of algorithms in Logo. Basics of working in the dynamic geometry environment. Educational applications and Internet in mathematics education. Use of numerical and graphical representations of data and modelling in the spreadsheet environment.					
Recommended literature: B. Brdička: The Role of Internetu in Education, 2003, http://it.pedf.cuni.cz/~bobr/role/econt.htm . S. Lukáč a kol.: IKT vo vyučovaní matematiky, Asociácia projektu Infovek 2002. M. Černochová a kol.: Využití počítače při vyučování. Portál, 1998. Z. Šťastný: Matematické a statistické výpočty v Microsoft Excelu, Computer Press 2001.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 138					
A	B	C	D	E	FX
54.35	26.81	9.42	7.25	2.17	0.0
Provides: doc. RNDr. Stanislav Lukáč, PhD.					

Date of last modification: 03.05.2015
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ UAD/10	Course name: Introduction to data analysis
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Test and individual project work. Oral presentation of the individual project work.	
Learning outcomes: To know the basic purpose of statistical data analysis, its methods and statistical thinking and understand its importance for science and practical life. To understand elementary statistical concepts. To gain experience in handling real data using spreadsheet Excel and statistical software R-Excel.	
Brief outline of the course: 1. Introduction (the basic philosophy and aim of statistical data analysis, descriptive and inductive statistics) 2. Collecting Data (types of data, random sample, randomized experiment) 3. Handling Data (visualization, summarizing – measures of center, measures of variability, relationships in data – introduction to regression and correlation) 4. Statistical inference (elementary view into estimation and testing hypothesis)	
Recommended literature: 1. Anděl, J.: Statistické metody, Matfyzpress, Praha, 1998 (in Czech) 2. Heiberger, R.M., Neuwirth, E.: R Through Excel: A Spreadsheet Interface for Statistics, Data Analysis, and Graphics, Springer, 2009 3. Rossman, A.J.: Workshop Statistics: Discovery with Data and Fathom, 3rd ed. Wiley, 2009 4. Utts, J.M.: Seeing Through Statistics, Thomson Brooks/Cole, Belmont, 2005 5. Utts, J.M., Heckard R.F.: Mind on Statistics, 3rd ed. Thomson Brooks/Cole, Belmont, 2007 6. Zvára, K., Štěpán, J.: Pravděpodobnost a matematická statistika, Matfyzpress, Praha, 2001 (in Czech)	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 220					
A	B	C	D	E	FX
30.0	26.82	32.27	10.45	0.0	0.45
Provides: doc. RNDr. Ivan Žežula, CSc., RNDr. Martina Hančová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ VEK1/03		Course name: Introduction to Ecology			
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 credits: 3					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Fundamental parameters and relations in ecological science.					
Brief outline of the course: Ecological factors and relations in environment (air, water, soil); influence of ecological factors on individuals (morphological adaptations, behavioral reactions); populations and communities; ecosystems (impact assessment); conservation and biodiversity.					
Recommended literature: Begon, M., Harper, J. L., Townsend, C. L.: Ecology: individuals, populations, and communities. Blackwell Sci. Publ., 1990					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1324					
A	B	C	D	E	FX
18.2	15.18	23.87	19.18	13.44	10.12
Provides: prof. RNDr. Igor Hudec, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ UDM/10	Course name: Introduction to mathematics
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present	
Number of credits: 3	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisites:	
Conditions for course completion: Two tests during the semester.	
Learning outcomes: Repetition of problematic sections of the secondary mathematics by interesting tasks.	
Brief outline of the course: Simplification of algebraic expressions. Real number, absolute value of real numbers; equations and inequalities. Irrational equations and inequalities. Concept of function. Linear and quadratic function; equations and inequalities. Exponential and logarithmic function; equations and inequalities. Goniometric functions; equations and inequalities. Complex numbers.	
Recommended literature: 1. V. Medek - L. Mišík - T. Šalát: REPETITÓRIUM STREDOŠKOLSKEJ MATEMATIKY, Alfa Bratislava, 1976 2. S. Richtárová - D. Kyselová: MATEMATIKA (pomôcka pre maturantov a uchádzačov o štúdium na vysokých školách), Enigma Nitra, 1998 3. O. Hudec – Z. Kimáková – E. Švidroňová: PRÍKLADY Z MATEMATIKY (pre uchádzačov o štúdium na TU v Košiciach), EF TU Košice, 1999 4. F. Peller – V. Šáner – J. Eliáš – Ľ. Pinda: MATEMATIKA – Podklady na prijímacie testy pre uchádzačov o štúdium, Ekonóm Bratislava, 2000/2001 5. F. Vesajda – F. Talafous: ZBIERKA ÚLOH Z MATEMATIKY pre stredné všeobecnovzdelávacie školy a gymnáziá, SPN Bratislava, 1973 6. J. Lukášová – O. Odvárko – B. Riečan – J. Šedivý – J. Vyšín: ÚLOHY Z MATEMATIKY pre 4. ročník gymnázia, SPN Bratislava, 1976	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 373					
A	B	C	D	E	FX
22.79	12.06	16.89	15.82	19.3	13.14
Provides: doc. RNDr. Matúš Harminec, CSc., Mgr. Lucia Janičková, Mgr. Tadeáš Gavala, RNDr. Veronika Hubeňáková, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: Dek. PF UPJŠ/USPV/13	Course name: Introduction to Study of Sciences
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: Per study period: 12s / 3d Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 733	
abs	n
96.32	3.68
Provides: doc. RNDr. Mária Kožurková, CSc., prof. RNDr. Katarína Cechlárová, DrSc., prof. RNDr. Beňadik Šmajda, CSc., prof. Mgr. Jaroslav Hofierka, PhD., doc. RNDr. Ivan Žežula, CSc., doc. RNDr. Vladimír Zelenák, PhD., doc. RNDr. Jozef Hanč, PhD., RNDr. Ondrej Krídlo, PhD., Mgr. Vladislav Kolarčík, PhD., RNDr. Janetta Nestorová-Dická, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ LCO/10		Course name: Linear and integer programming			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: ÚMV/ALGa/10					
Conditions for course completion: Two tests, using software CASSIM, oral exam					
Learning outcomes: To learn the solving methods of linear programming					
Brief outline of the course: Formulation of linear and integer programs. Graphic solution. Simplex method, its variants and finiteness. Duality and its economic interpretation. Sensitivity analysis and parametric programming. Algorithms for integer programming.					
Recommended literature: Ch. Papadimitriou – K. Steiglitz: Combinatorial Optimization: Algorithms and Complexity, 1984 R.J. Vanderbei, Linear Programming: Foundations and Extensions (Kluwer 2001), electronic version: http://www.princeton.edu/~rvdb/LPbook/					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 130					
A	B	C	D	E	FX
21.54	13.08	22.31	21.54	20.77	0.77
Provides: doc. RNDr. Roman Soták, PhD., Mgr. Andrej Gajdoš					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ LTM/10		Course name: Logic and set theory			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚMV/MANb/10					
Conditions for course completion: Exam					
Learning outcomes: To obtain a basic knowledge on the mathematical notion of an infinity. Analysis of the notion of a proof.					
Brief outline of the course: Set as a mathematical formularization of an infinity. Properties of the set of reals. Mathematical induction. Relations and mappings. Finite and countable sets. Cardinality of continuum. Elementary cardinal arithmetics. Sentential calculus, an axiomatization. Completeness Theorem. Methods of proofs. Language of predicate calculus, examples. Axiomatizations of predicate calculus and the notion of a proof. Methods of proofs in predicate calculus.					
Recommended literature: E. Mendelson, Introduction to Mathematical Logic, van Nostrand 1964.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 509					
A	B	C	D	E	FX
12.57	16.11	20.04	24.75	15.91	10.61
Provides: RNDr. Jaroslav Šupina, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MAE/10		Course name: Macroeconomics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Final mark is given based on the results of the tests written during the semester and oral exam, that evaluates the verbal argument about the studied models.					
Learning outcomes:					
Brief outline of the course: Basic macroeconomic notions: Gross domestic product, inflation, unemployment.. Analysis of goods markets. Financial markets. IS-LM model in closed economy. Open economy. IS-LM model in open economy. Models of labour market. Phillips curve, Okun law. Inflation and economic growth. High depth.					
Recommended literature: 1. Olivier Blanchard, Alessia Amighini, Francesco Giavazzi: MACROECONOMICS, A EUROPEAN PERSPECTIVE, Pearson Education, 2010 2. N.GREGORY MANKIW, MACROECONOMICS, 7th Edition, Harvard University, Worth Publishers 2009					
Course language: Slovak and English					
Notes:					
Course assessment Total number of assessed students: 59					
A	B	C	D	E	FX
18.64	15.25	23.73	22.03	13.56	6.78
Provides: prof. RNDr. Katarína Cechlárová, DrSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MANa/10		Course name: Mathematical analysis I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 3 Per study period: 42 / 42 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Two written test during semester and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.					
Learning outcomes: The aim of the course is to give introductory knowledge about real numbers, sequences and series of real numbers, and to develop certain calculation skills in the field.					
Brief outline of the course: Real numbers - axioms and properties. Real functions - basic properties (monotone, bounded, even/odd, inverse), transformations of graphs of functions. Infinite sequences - operations, boundedness, monotonicity, convergence. Infinite series - operations, convergence, criteria of convergence.					
Recommended literature: 1. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006. 2. Bruckner, A. M., Bruckner J. B., Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008. 3. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 1287					
A	B	C	D	E	FX
6.22	7.69	12.12	13.36	34.73	25.87
Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MANb/10		Course name: Mathematical analysis II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 3 Per study period: 56 / 42 Course method: present					
Number of credits: 8					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚMV/MANa/10					
Conditions for course completion: Two written test during semester and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.					
Learning outcomes: The purpose of the course is to provide introductory knowledge in differential and integral calculus of real functions of one real variable and to develop computational skills in the field.					
Brief outline of the course: Limit and continuity of real functions, elementary functions. Differential calculus - derivatives of the first and of higher orders, the basic theorems of differential calculus and their use to study properties and behavior of functions. Indefinite integral - basic methods for finding primitive functions. Newton integral and its basic properties.					
Recommended literature: 1. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006. 2. Bruckner, A. M., Bruckner J. B., Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008. 3. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 811					
A	B	C	D	E	FX
8.38	8.26	12.21	18.74	36.25	16.15
Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD.					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ MAN2c/10	Course name: Mathematical analysis III
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 3.	
Course level: I.	
Prerequisites: ÚMV/MANb/10	
Conditions for course completion: Two written test during semester and activity student to practice. Final evaluation is given by continuous assessment, written and oral part of the exam.	
Learning outcomes: The purpose of the course is to provide introductory knowledge in Riemann integral calculus of real functions of one real variable and series of real functions. To develop computational skills in the field and extend the student ability to use this theory in applications. To teach the basic knowledge of the subject matter in the syllabus and develop the ability to use this theory.	
Brief outline of the course: Definite Riemann integral - definition, elementary properties, calculation methods, applications. Improper Riemann integral. Sequences and series of real functions – pointwise and uniform convergence, properties of the limit function and the sum. Power series, Taylor series and their applications.	
Recommended literature: 1. O. Hutník: Určitý integrál, UPJŠ, Košice, 2012 (in Slovak). 2. Brannan, D.: A First Course in Mathematical Analysis, Cambridge University Press, Cambridge 2006. 3. Bruckner, A. M. - Bruckner J. B. - Thomson, B. S.: Real Analysis, Second Edition, ClassicalRealAnalysis.com, 2008. 4. Zorich, V. A.: Mathematical Analysis I, Springer-Verlag 2002.	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 620					
A	B	C	D	E	FX
7.1	6.77	12.58	18.39	43.23	11.94
Provides: doc. RNDr. Ondrej Hutník, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MAN1d/10		Course name: Mathematical analysis IV			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 2 Per study period: 56 / 28 Course method: present					
Number of credits: 7					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: ÚMV/MAN1c/10 or ÚMV/MAN2c/10					
Conditions for course completion: exam					
Learning outcomes: Understanding of the basic rigorous ideas of Mathematical Analysis.					
Brief outline of the course: Metric spaces. Complete, compact and connected sets. Rings sigma-rings. Measure. Outer measure. Lebesgue measure. Measurable sets. Measurable functions. Lebesgue integral. Lebesgue integral versus Riemann integral. Calculations of Lebesgue integrals. Applications.					
Recommended literature: B. S. Thomson, J. B. Bruckner, A. M. Bruckner: Elementary Real Analysis, Prentice Hall, 2001. A. M. Bruckner, J. B. Bruckner, B. S. Thomson: Real Analysis, Prentice Hall, 1997. T. Neubrunn, B. Riečan: Miera a integrál, Veda, Bratislava, 1981. B. Riečan, T. Neubrunn: Teória miery, Veda, Bratislava, 1992. Т. А. Леонтьева, В. С. Панферов, В. С. Серов: Задачи по теории функций действительного переменного, Издательство Московского университета, Москва, 1997.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 212					
A	B	C	D	E	FX
3.77	4.72	13.68	22.64	42.45	12.74
Provides: prof. RNDr. Jozef Doboš, CSc., RNDr. Jaroslav Šupina, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ MAN2d/10	Course name: Mathematical analysis IV
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 5	
Recommended semester/trimester of the course: 4.	
Course level: I.	
Prerequisites: ÚMV/MANb/10	
Conditions for course completion: Continuous assessment is taken the form of small tests and two main tests during the semester. Final evaluation is given by continuous assessment (40%), written and oral part of the exam (60%).	
Learning outcomes: To teach the basic knowledge of the subject matter in the syllabus and develop the ability to use this theory. The students also learn mathematical culture, notation and mathematical way of thinking and expression.	
Brief outline of the course: 1. Metric space - Euclidean space, topological properties of points and sets in metric space. 2. Function of several real variables - basic concepts, limits and continuity. 3. Differential calculus of functions of several real variables - partial derivative, differentiability and total differential (also higher order), Taylor polynomials, directional derivative, local and global extrema, constrained local extrema. 4. Double (two dimensional) integral - definition, calculation methods, applications.	
Recommended literature: 1. L. Kluvánek, I. Mišík, M. Švec: Matematika I, II, SVTL, Bratislava, 1959 (in Slovak). 2. Z. Došlá, O. Došlý: Diferenciální počet funkcí více proměnných, vysokoškolský učebný text, Masarykova univerzita v Brně, Brno, 2003 (in Czech). 3. R. E. Williamson, H. F. Trotter: Multivariable mathematics, Prentice Hall (Pearson), Upper Saddle River, 2004. 4. B. S. Thomson, J. B. Bruckner, A. M. Bruckner: Elementary real analysis, Prentice Hall (Pearson), Lexington, 2008. 5. J. Stewart: Calculus: Early transcendentals, Brooks Cole (Thomson), Toronto, 2008. 6. P. Pták: Calculus II (A course for engineers), ČVUT v Praze, Praha, 1997. 7. J. Eliaš, J. Horváth, J. Kajan: Zbierka úloh z vyššej matematiky 3, 4, SVTL, Bratislava, 1966 (in Slovak).	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 282					
A	B	C	D	E	FX
8.51	9.57	17.73	19.86	34.75	9.57
Provides: RNDr. Lenka Halčinová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MRUa/15		Course name: Mathematical problem solving strategies I			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Evaluation will be awarded on the basis of continuous assessment and final test.					
Learning outcomes: To acquaint students with problems and strategies for the solutions of the problems at the primary and secondary school, and with the specific problems of teaching mathematics at primary and secondary school.					
Brief outline of the course: Basic knowledge of school mathematics, different strategy of problem solution, problems from mathematical competitions concerning Equations and inequalities and their systems, Functions, Financial Mathematics.					
Recommended literature: [1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in Slovak) [2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in Czech) [3] Učebnice a zbierky úloh z matematiky ZŠ a SŠ (in Slovak)					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 121					
A	B	C	D	E	FX
31.4	23.97	23.14	11.57	9.09	0.83
Provides: doc. RNDr. Stanislav Lukáč, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MRUB/15		Course name: Mathematical problem solving strategies II			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚMV/MRUa/15					
Conditions for course completion: The award is based on the results of written checks carried out during the semester. The resulting trial is granted on the basis of continuous assessment and seminar work.					
Learning outcomes: To acquaint students with problems and strategies for the solutions of the problems at the primary and secondary school, and with the specific problems of teaching mathematics at primary and secondary school.					
Brief outline of the course: Basic knowledge of school mathematics, various methods for the task, the role of mathematical competitions for thematic units Planimetry, stereometry, goniometry.					
Recommended literature: [1] Hejný, M. a kol., Teória vyučovania matematiky 2. SPN, Bratislava 1989 (in Slovak) [2] Kopka, J., Hrozny problémů ve školské matematice, Univerzita J. E. Purkyně, Ústí nad Labem 1999 (in Czech) [3] Jonson-Wilder.S., Mason.J.: Developing thinking in Geometry, Sage, 2009 [4] Učebnice a zbierky úloh z matematiky ZŠ a SŠ					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 93					
A	B	C	D	E	FX
36.56	10.75	33.33	11.83	7.53	0.0
Provides: doc. RNDr. Dušan Šveda, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MRUc/15		Course name: Mathematical problem solving strategies III			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚMV/MRUb/15					
Conditions for course completion: During the semester will be 3 written exams. Evaluation A - at least 90% of the points, evaluation B - at least 80%, evaluation C at least 70%, evaluation D at least 60%, evaluation E rating of at least 50% of the points. Credits shall not be granted to a student who receives less than 50% of the points.					
Learning outcomes: Students become familiar with the tasks, methods of problem solving, solving strategies and with specific problems of teaching mathematics at primary and secondary schools to topics combinatorics, probability and statistics.					
Brief outline of the course: Basic knowledge of school mathematics, from the topics: combinatorics, probability and statistics.					
Recommended literature: Hecht, T., Sklenáriková, Z., Metódy riešenia matematických úloh, Bratislava, SPN, 1992. (in slovak) Hecht, T. a kol., Matematika pre 1.-4. ročník gymnázií a SOŠ, OrbisPictusIstropolitana, Bratislava 1999-2002. (in slovak) Krantz, S.G., Techniques of Problem Solving, AMS, 1997. Larson, L.C., Metódy riešenia matematických problémov, Bratislava, Alfa, 1990. (in slovak)					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 97					
A	B	C	D	E	FX
25.77	35.05	22.68	10.31	6.19	0.0
Provides: RNDr. Ingrid Semanišinová, PhD.					
Date of last modification: 03.05.2015					

Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MTM/14		Course name: Mathematics			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 1					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites: ÚMV/MAN2c/10 and ÚMV/ALG2b/10 and ÚMV/ATC/10					
Conditions for course completion: Acquiring the required number of credits in the structure defined by the study plan.					
Learning outcomes: Evaluation of student's competences with respect to the profile of the graduate.					
Brief outline of the course:					
Recommended literature:					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 13					
A	B	C	D	E	FX
23.08	23.08	23.08	30.77	0.0	0.0
Provides:					
Date of last modification: 21.05.2016					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MIE/13		Course name: Microeconomics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: The minimum necessary number of points from tests written during semester is 50%, plus the ability of verbal argumentation in the final oral exam.					
Learning outcomes: Understanding of basic principles of microeconomics and ability to apply them in practical situations.					
Brief outline of the course: Economics and economy. Supply and demand. Consumer Theory. Theory of firm. Perfect competition. Monopoly. Labour market. Market failure. Externalities and Public goods.					
Recommended literature: 1. http://umv.science.upjs.sk/cechlarova/MIE/MIE.htm - podklady k prednáška, testy na cvičenia, materiály z dennej tlače 2. H.L. Varian, Intermediate Mikroekonomics, WW Norton, 1993 3. J.M. Perloff, Microeconomics, 6th Edition, Addison Wesley, 2012 4. J. Sloman, Economics, 6th Edition, Prentice Hall, 2006					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 64					
A	B	C	D	E	FX
26.56	18.75	20.31	20.31	12.5	1.56
Provides: prof. RNDr. Katarína Cechlárová, DrSc., RNDr. Veronika Kopčová					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ MKV/15		Course name: Mikrobiológia a základy virológie			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion: Attendance of practicals (at least 90%), 2 written examinations during semester, final oral examination					
Learning outcomes: Students will obtain a basic informations on viruses, prokaryotic and eukaryotic microorganisms, their cytology, physiology, genetics, ecology, classification, and importance . Information on basic methods for studying microorganisms will be provided.					
Brief outline of the course: Viruses, prokaryotic and eukaryotic microorganisms, their cytology, physiology, genetics, ecology, classification. The importance of microorganisms for humans and environment.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1228					
A	B	C	D	E	FX
21.66	11.89	17.75	20.28	23.78	4.64
Provides: doc. RNDr. Peter Pristaš, CSc., RNDr. Mariana Kolesárová, PhD., RNDr. Lenka Maliničová, PhD.					
Date of last modification: 07.10.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/MB1/01		Course name: Molecular Biology			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Oral examination.					
Learning outcomes: To provide the students with knowledge of molecular basis of inheritance and control of gene expression and development.					
Brief outline of the course: Structure and properties of information macromolecules. Molecular mechanisms of DNA replication and repair, transcription and translation. Prokaryotic and eukaryotic genome. Control of gene expression in prokaryotes and eukaryotes. Control of cell cycle.					
Recommended literature: Lodish, H., Baltimore, D., Berk, A. et al.: Molecular Cell Biology. Sci. Amer. Books Inc., W.H. Freeman and Company, New York, 1995 Myers, R.A.: Molecular Biology and Biotechnology. VCH Publishers Inc., New York, 1995					
Course language:					
Notes:					
Course assessment Total number of assessed students: 770					
A	B	C	D	E	FX
6.23	10.39	17.14	17.66	34.29	14.29
Provides: doc. RNDr. Peter Solár, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ NJ//13	Course name: Naval Yachting
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 2	
abs	n
100.0	0.0
Provides: doc. Mgr. Rastislav Feč, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/TCS/10		Course name: Number theory			
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 credits: 3					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚMV/ATC/10					
Conditions for course completion: According to tests and exam.					
Learning outcomes: To obtain knowledge on quadratic congruences.					
Brief outline of the course: Chinese remainder theorem, Euler function, quadratic congruences, Pythagorean equation.					
Recommended literature: M. B. Nathanson: Elementary Methods in Number Theory. Springer, 2000. H. E. Rose: A Course in Number Theory. Clarendon Press, Oxford, 1994.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 529					
A	B	C	D	E	FX
26.28	27.6	29.87	11.15	2.65	2.46
Provides: doc. RNDr. Matúš Harminec, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ Pg/15		Course name: Pedagogy			
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 credits: 2					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 67					
A	B	C	D	E	FX
40.3	16.42	19.4	7.46	14.93	1.49
Provides: PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Boberová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ FG1/03		Course name: Phytogeography			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion: Written work. Exam.					
Learning outcomes: To obtain theoretical and practical knowledge from phytogeography.					
Brief outline of the course: History of phytogeography. Plants and environment. Chorology, area, area disjunctions, relics, endemites, vicariancy, floral elements. Main course of florogenesis since paleozoic to quaternary ages. Postglacial evolution of Slovak vegetation. Regional phytogeography of Earth. Vegetation geography: from tropical rainforests to tundras. Changes of earth vegetation and their study. Geographical origin of cultivated plants. Practices: Fieldworks. Preparing of maps. Phytogeographical division of Slovakia. Students seminar works on phytogeography.					
Recommended literature: Hendrych R.: Fytografie. - SPN, Praha 1984. Brown J. H., Lomolino M. V.: Biogeography. - Sinauer Associates, Sunderland, 1998.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 277					
A	B	C	D	E	FX
41.52	22.74	21.3	6.5	6.86	1.08
Provides: prof. RNDr. Pavol Mártonfi, PhD., Mgr. Vladislav Kolarčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ FR1/10		Course name: Plant Physiology			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 3 Per study period: 28 / 42 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚBEV/VB1/01					
Conditions for course completion:					
Learning outcomes: Overview of all important physiological processes in plant organisms.					
Brief outline of the course: Water in plan, mineral nutrition, photosynthesis, pholem transport, respiration, lipid biosynthesis, heterotrophy, metabolism of macronutrients, secondary metabolism, growth and development, plant hormones, photoreceptors, dormancy, germination, flowering, plant movements, stress physiology Lab practicals: Measurements of water potential, Quantitative analyses of nutrients in dust. Separation of assimilation pigments by TLC. Quantitative analyses of chlorophyll a and b. Biotest of cytokinins. Qualitative and quantitative analyses of sugars. HPLC separation of glucose and fructose. Measurements of respiration by selective electrode. Measurement of total nitrogen by Kjeldahl method. Qualitative analyses of proteins. Activity of some enzymes in potato and pea. Colour of anthocyanins at different pH. Measurement of silica level by distillation method. Germination of seeds.					
Recommended literature: Hopkins W.G. Huner N.P.A., Introduction to plant physiology. 3rd ed., Wiley, New York 2004					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1406					
A	B	C	D	E	FX
14.79	12.02	14.37	13.3	23.26	22.26
Provides: prof. RNDr. Miroslav Repčák, DrSc., Mgr. Silvia Gajdošová, Ph.D., doc. RNDr. Peter Paľove-Balang, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/PP/15		Course name: Positive Psychology			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 14					
A	B	C	D	E	FX
85.71	7.14	0.0	0.0	7.14	0.0
Provides: Mgr. Jozef Benka, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ PSTa/10		Course name: Probability and statistics I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚMV/MAN1c/10 or ÚMV/MAN2c/10					
Conditions for course completion: To obtain in two written tests during the semester at least 50%. Based on written tests and oral exam.					
Learning outcomes: To provide a grounding in axiomatic theory of probability, random variables and their characteristics, special types of distributions and their applications.					
Brief outline of the course: Probability space, definitions and properties of probability. Conditional probability and independence. Random variables, their distribution function and characteristics. Mean, variance and skewness.. Discrete and absolutely continuous distributions. Quantile and characteristic functions, their properties. Relation between characteristic function and moments. Median and mode. Transformation of random variables. Special types of distributions with applications (binomial, Poisson, geometric, uniform, exponential, normal, chí-square, Student, Fisher). Central limit theorem.					
Recommended literature: 1. Skřivánková V.: Probability and Statistics, UPJŠ, Košice, 2009 2. Dekking at al.: A Modern Introduction to Probability and Statistics, Springer, 2005. 3. Pfeiffer P.E.: Probability for Applications, Springer, New York, 1990. 4. Ross S.M.: Introduction to Probabability Models, Elsevier, 2007.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 283					
A	B	C	D	E	FX
7.42	14.49	16.25	25.09	25.09	11.66
Provides: doc. RNDr. Valéria Skřivánková, CSc., RNDr. Martina Hančová, PhD.					

Date of last modification: 03.05.2015
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ PSTb/10		Course name: Probability and statistics II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion: To obtain in two written tests during the semester at least 50%. Total evaluation based on written tests and oral exam.					
Learning outcomes: To provide a grounding in statistical methods and their applications for real life problems.					
Brief outline of the course: Random vectors, their distributions and characteristics. Joint and marginal distributions. Correlation and regression, properties of correlation coefficient. Random sample, sampling distributions and characteristics. Some important statistics and their distributions. Point estimators and their properties. Maximum likelihood method. Interval estimates, confidence interval construction. Testing of statistical hypothesis, critical region, level of significance. Methods for searching optimal critical regions. Some important parametric and nonparametric tests.					
Recommended literature: 1. Skřivánková V.: Probability and statistics, UPJŠ, Košice, 2009. 2. Dekking at al.: A modern Introduction to Probability and Statistics. Springer, 2005. 3. Sincich T.: Statistics by example, Dellen Publishing Company, New Jersey, 1990.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 160					
A	B	C	D	E	FX
18.13	21.25	19.38	24.38	11.88	5.0
Provides: doc. RNDr. Valéria Skřivánková, CSc., RNDr. Martina Hančová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/Ps/15		Course name: Psychology			
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 credits: 2					
Recommended semester/trimester of the course: 1., 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 43					
A	B	C	D	E	FX
4.65	6.98	37.21	25.58	9.3	16.28
Provides: Prof. PhDr. Oľga Orosová, CSc., PhDr. Anna Janovská, PhD., Mgr. Lucia Hricová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/PKŽ/15		Course name: Psychology of Everyday Life			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 32					
A	B	C	D	E	FX
40.63	28.13	25.0	6.25	0.0	0.0
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	Course name: Seaside Aerobic Exercise
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 7	
abs	n
57.14	42.86
Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ VKA/10		Course name: Selected topics in algebra			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion: According to tests and to the exam.					
Learning outcomes: To obtain basic knowledge on universal algebra; to be able to apply the theory in concrete situations.					
Brief outline of the course: Relations, operations, algebraic structures. Substructures. Congruences, homomorphism theorems. Automorphism groups and endomorphism monoids. Terms, term operations, identities, varieties.					
Recommended literature: B. Jónsson: Topics in Universal Algebra, Springer-Verlag 1972 M. Kolibiar a kol.: Algebra a príbuzné disciplíny, Bratislava 1992					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 86					
A	B	C	D	E	FX
5.81	18.6	25.58	26.74	20.93	2.33
Provides: prof. RNDr. Danica Studenovská, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ VEM/10		Course name: Selected topics in elementary mathematics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present					
Number of credits: 3					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites: ÚMV/MAN2c/10					
Conditions for course completion: exam					
Learning outcomes: Obtain knowledge about the structure of elementary mathematics with respect to advanced mathematics; the development of mathematical skills of prospective teachers.					
Brief outline of the course: Language of Mathematics; syntax and semantics; sets, relations, rational and irrational numbers, equations and inequations in reals; elementary functions					
Recommended literature: W.W. Esty: The Language of Mathematics, Montana State University, 2007. F. Klein: Elementary mathematics from an advanced standpoint, Dower Publications, 1945.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 175					
A	B	C	D	E	FX
20.57	17.14	18.86	17.71	23.43	2.29
Provides: prof. RNDr. Jozef Doboš, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/VKFV/07		Course name: Selected Topics in Philosophy of Education (General Introduction)			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites: KFaDF/DF1/05					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. PhDr. Pavol Tholt, PhD., mim. prof.					
Date of last modification:					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ SHM/10	Course name: Seminar on history of mathematics
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 5.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: Homework, presentation on the chosen topic during the seminar. More than 91 points - evaluation of A. 81-90 points - evaluation of B. 71-80 points - rating C. 61-70 points - evaluation of D. 51-60 points - evaluation of E. Less than 50 points - FX evaluation.	
Learning outcomes: Students get an overview of the history of the development of certain mathematical disciplines and selected terms and about parallel between phylogenesis and ontogenesis of mathematical thinking.	
Brief outline of the course: Mathematics in Early Civilizations. Greek Mathematics. Mathematics in the Near and Far East (Arabia, China, India). Medieval European Mathematics. The Renaissance of Mathematics. The Beginning of Modern Mathematics.	
Recommended literature: Burton, D. M.: The History of Mathematics: An Introduction. McGraw–Hill, 2007. Devlin, K.: Jazyk matematiky. Dokořán, 2002 (in czech) Kolman, A.: Dejiny matematiky ve starověku. Academia, Praha, 1968 (in slovak) Juškevič, A. P.: Dejiny matematiky ve středověku. Academia, Praha 1977 (in slovak) Znáň, Š. a kol.: Pohľad do dejín matematiky. Alfa, Bratislava, 1986 (in slovak) Konforovič, A.G.: Významné matematické úlohy, SPN Praha, 1989 (in slovak)	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 115					
A	B	C	D	E	FX
79.13	6.09	8.7	2.61	3.48	0.0
Provides: RNDr. Ingrid Semanišínová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ SMO/10	Course name: Seminar to mathematical olympiad
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 6.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: Individual problem solving during seminars and homework. More than 91 points - evaluation of A. 81-90 points - evaluation of B. 71-80 points - rating C. 61-70 points - evaluation of D. 51-60 points - evaluation of E. Less than 50 points - FX evaluation.	
Learning outcomes: Students become familiar with solving problems from mathematical olympiads and mathematical competitions. They acquire theoretical basics necessary to lead mathematical group of talented children.	
Brief outline of the course: Number theory. Equations, inequations, inequalities. Word problems. Planimetry. Stereometry. Combinatorics. Pigeonhole principle. Combinatorial geometry. Probability. Math games. Interesting problems.	
Recommended literature: Brožúry z edície Škola mladých matematikov. (in slovak) Sériá brožúr: XY. ročník matematickej olympiády. (in slovak) Ziegler, G.M.: Matematika Vám to spočítá, Universum, Praha, 2011. (in czech) Zhouf, J. a kol.: Matematické příběhy z korespondenčních seminářů, Prometheus, Praha, 2006. (in czech)	
Course language: Slovak	
Notes:	

Course assessment					
Total number of assessed students: 137					
A	B	C	D	E	FX
65.69	12.41	10.22	8.76	2.92	0.0
Provides: RNDr. Ingrid Semanišínová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ OLŠ/15		Course name: School Administration and Legislation			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 15					
A	B	C	D	E	FX
26.67	20.0	40.0	6.67	6.67	0.0
Provides: Mgr. Zuzana Boberová, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPO/SPKV/15		Course name: Social and Political Context of Education			
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 credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: prof. PhDr. Marcela Gbúrová, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/OJPV1/07		Course name: Specialised German Language - Natural Sciences 1			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 125					
A	B	C	D	E	FX
20.8	21.6	26.4	22.4	8.0	0.8
Provides: Mgr. Eva Černáková, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚTVŠ/ TVa/11	Course name: Sports Activities I.	
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of credits: 2		
Recommended semester/trimester of the course: 1.		
Course level: I., I.II., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 7947		
abs	n	neabs
87.96	8.12	3.93
Provides: PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc., doc. Mgr. Rastislav Feč, PhD., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško		
Date of last modification: 03.05.2015		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚTVŠ/ TVb/11	Course name: Sports Activities II.	
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of credits: 2		
Recommended semester/trimester of the course: 2.		
Course level: I., I.II., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 7437		
abs	n	neabs
85.03	10.93	4.03
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., Mgr. Peter Bakalár, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD.		
Date of last modification: 03.05.2015		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚTVŠ/ TVc/11	Course name: Sports Activities III.	
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of credits: 2		
Recommended semester/trimester of the course: 3.		
Course level: I., I.II., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 4650		
abs	n	neabs
89.63	4.71	5.66
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško		
Date of last modification: 03.05.2015		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚTVŠ/ TVd/11	Course name: Sports Activities IV.	
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of credits: 2		
Recommended semester/trimester of the course: 4.		
Course level: I., I.II., II.		
Prerequisites:		
Conditions for course completion:		
Learning outcomes:		
Brief outline of the course:		
Recommended literature:		
Course language:		
Notes:		
Course assessment Total number of assessed students: 3884		
abs	n	neabs
85.79	6.77	7.44
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD.		
Date of last modification: 03.05.2015		
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ DGS/15	Course name: Students` Digital Literacy
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course: 1.	
Course level: I.	
Prerequisites:	
Conditions for course completion: continuous assessment and final project	
Learning outcomes: To acquire an overview of the current possibilities of digital technology to develop skills and competencies with emphasis on the area of communication, social interaction and personal. To acquire basic digital skills for working with advanced technologies (mobile phone, tablet, laptop, social media, online webtechnologies). To understand the value of existing advanced technologies for better and more effective learning, work and active life in higher education, lifelong learning and further career prospects.	
Brief outline of the course: Introduction to the problems of current, commonly available digital technology. Tools for access to online information source (mobile applications for access to information systems, databases, data books). Tools for collecting, generating direct information and data and its subsequent analysis and visualization. Tools for providing and sharing of electronic content (cloud technology - Google Drive, Youtube, Google+, Skydrive, Dropbox). Tools for communication, discussion and collaborative activities. Legal work with digital technologies and resources, plagiarism, critical evaluation of digital resources. Security, privacy, digital ethics and etiquette, digital citizenship.	
Recommended literature: 1. Bruff, D. (2009). Teaching with classroom response systems: Creating active learning environments. San Francisco: Jossey-Bass. 2. Byrne, R. (2012). Google Drive and Docs for Teachers. Free Tech for Teachers. 3. Kawasaki, G. (2012). What the Plus! Google+ for the Rest of Us. Amazon igital Services. 4. Kolb, L. (2011). Cell Phones in the Classroom: A Practical Guide for Educators. International Society for Technology in Education.	
Course language: Slovak	
Notes:	

Course assessment	
Total number of assessed students: 19	
abs	n
100.0	0.0
Provides: doc. RNDr. Stanislav Lukáč, PhD., doc. RNDr. Jozef Hanč, PhD., doc. RNDr. Ľubomír Šnajder, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ SVK/01		Course name: Student Scientific Conference			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4., 6.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 185					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides:					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ SVK/10		Course name: Students scientific conference			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course:					
Course level: I., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Individual scientific work of students. Publishing of obtained results in a written form and as a public presentation.					
Brief outline of the course:					
Recommended literature: With respect to the research problematics (article in journals, books).					
Course language: Slovak or English					
Notes:					
Course assessment Total number of assessed students: 57					
A	B	C	D	E	FX
98.25	1.75	0.0	0.0	0.0	0.0
Provides:					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ LKSp//13	Course name: Summer Course-Rafting of TISA River
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 92	
abs	n
35.87	64.13
Provides: Mgr. Peter Bakalár, PhD.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ KP/12	Course name: Survival Course
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 251	
abs	n
43.82	56.18
Provides: Mgr. Marek Valanský, MUDr. Peter Dombrovský	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/TVE/08		Course name: Theory of Education			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 201					
A	B	C	D	E	FX
23.38	32.34	28.36	9.45	1.49	4.98
Provides: PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Boberová, PhD., Mgr. Stanislava Marosi, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚTVŠ/ ZKLS//13	Course name: Winter Ski Training Course
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present	
Number of credits: 2	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 81	
abs	n
32.1	67.9
Provides: PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc.	
Date of last modification: 03.05.2015	
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚBEV/ ZOG1/03	Course name: Zoogeography
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present	
Number of credits: 6	
Recommended semester/trimester of the course:	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: active participation in seminars preparation of the oral presentation to the selected topic semestral written test oral examination	
Learning outcomes: The main goal of the subject is to get knowledge on the basic reasons of recent distribution of the animals on the Earth, zoogeographic regionalization of the Earth's surface and human influence on the faunal distribution in the history.	
Brief outline of the course: This course will review our current understanding of the patterns of animal distribution and the processes that influence distributions of species and their attributes. Zoogeography will integrate information on the historical and current ecology, genetics, and physiology of animals and their interaction with environmental processes (continental drift, climate) in regulating geographic distributions. The course will emphasize descriptive and analytical approaches useful in hypothesis testing in zoogeography and will illustrate applied aspects of zoogeography (e.g. refuge design in conservation).	
Recommended literature: Buchar, J., 1983: Zoogeografie. SPN Praha Darlington, P.J., 1998: Zoogeography: The geographical distribution of animals. Krieger, USA Lomolino M.V., Brown J.H., Riddle B. R., 2005: Biogeography. Sinauer Associates, 1-845 Plesník, P., Zatkalík, F., 1996: Biogeografia. Vysokoškolské skriptá, PríFUK Bratislava	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 736					
A	B	C	D	E	FX
20.52	23.37	25.95	19.57	8.29	2.31
Provides: doc. RNDr. Ľubomír Kováč, CSc.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ ZO1/15		Course name: Zoology I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites: ÚBEV/PMZ/10					
Conditions for course completion:					
Learning outcomes: Basis of Invertebrata taxonomy including taxonomy of Monocytozoa. Importance and function of chosen individual taxons. Phylogenetic relations.					
Brief outline of the course: Anatomy, morphology and development of separate groups of Invertebrates – especially Porifera, Cnidaria, Plathelminthes, Nemathelminthes, Mollusca, Anelida, Arthropoda, Echinodermata. Characteristic species.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 143					
A	B	C	D	E	FX
7.69	23.08	16.08	22.38	20.28	10.49
Provides: doc. RNDr. Ľubomír Panigaj, CSc., RNDr. Peter Ľuptáčik, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ ZO1/03		Course name: Zoology I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3., 5.					
Course level: I.					
Prerequisites: ÚBEV/PMZ/10					
Conditions for course completion:					
Learning outcomes: Basis of Invertebrata taxonomy- Importance and function of chosen individual taxons. Phylogenetic relations.					
Brief outline of the course: Anatomy, morphology and development of separate groups of Invertebrates – especially Porifera, Cnidaria, Plathelminthes, Nemathelminthes, Mollusca, Anelida, Arthropoda, Echinodermata. Characteristic species.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 888					
A	B	C	D	E	FX
7.66	15.32	19.48	19.93	26.8	10.81
Provides: doc. RNDr. Ľubomír Panigaj, CSc., RNDr. Peter Ľuptáčik, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ ZOO1/03		Course name: Zoology II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 4., 6.					
Course level: I.					
Prerequisites: ÚBEV/PMZ/10					
Conditions for course completion:					
Learning outcomes: Fundamental information on taxonomy and morphology of vertebrates					
Brief outline of the course: Systematic and phylogenetic relationships of vertebrate. Review of important groups of fishes, amphibians, reptiles, birds and mammals.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 742					
A	B	C	D	E	FX
24.93	26.82	19.81	16.44	9.16	2.83
Provides: RNDr. Marcel Uhrin, PhD., RNDr. Peter Ľuptáčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ ZOO1/15		Course name: Zoology II			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚBEV/PMZ/10					
Conditions for course completion:					
Learning outcomes: Fundamental information on taxonomy and morphology of vertebrates					
Brief outline of the course: Systematic and phylogenetic relationships of vertebrate. Review of important groups of fishes, amphibians, reptiles, birds and mammals.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 66					
A	B	C	D	E	FX
1.52	31.82	15.15	19.7	16.67	15.15
Provides: RNDr. Marcel Uhrin, PhD., RNDr. Peter Ľuptáčík, PhD.					
Date of last modification: 03.05.2015					
Approved: doc. RNDr. Ondrej Hutník, PhD., prof. RNDr. Pavol Mártonfi, PhD.					