

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 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, t.j. povolený je 1 opravný test	
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 až pokročilej úrovni ovládania jazyka (B2/C1 podľa Spoločného európskeho referenčného rámca pre jazyky). Predmet kladie dôraz na používanie akademickej 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: 292					
A	B	C	D	E	FX
29.11	22.26	16.1	11.3	8.22	13.01
Provides: PaedDr. Gabriela Bednáriková					
Date of last modification: 06.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 100					
A	B	C	D	E	FX
11.0	16.0	29.0	21.0	17.0	6.0
Provides: doc. RNDr. Matúš Harminec, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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 excercises.					
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: 1205					
A	B	C	D	E	FX
10.79	11.12	17.34	17.76	29.79	13.2
Provides: prof. RNDr. Danica Studenovská, CSc., RNDr. Igor Fabrici, Dr. rer. nat., RNDr. Miroslava Černegová, RNDr. Katarína Furcoňová, PhD., RNDr. Anna Mišková, RNDr. Peter Hudák, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 466					
A	B	C	D	E	FX
12.45	11.8	17.81	17.81	29.18	10.94
Provides: prof. RNDr. Danica Studenovská, CSc., doc. RNDr. Matúš Harminc, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ ANCHU/03		Course name: Analytical Chemistry			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites: ÚCHV/VCHU/14 or ÚCHV/VCHU/15 or ÚCHV/VCHU/10 or ÚCHV/VACH/10					
Conditions for course completion: 3x test of analytical calculations. Examination					
Learning outcomes: Survey of basic principles and tasks of analytical chemistry and applications of analytical methods in research and practice.					
Brief outline of the course: Subject and role of analytical chemistry. General principles and procedures - sampling, sample pre-treatment. Preparation of solutions. Evaluation of the results. Classification of analytical reactions. Qualitative analysis of cations and anions. Basic principles of organic analysis. Methods of quantitative analysis. General principles of gravimetry. Volumetric analysis. Instrumental methods of analytical chemistry (basic principles, instrumentation and applications) - electroanalytical, optical and separation methods.					
Recommended literature: Skoog D.A.: Principles of Instrumental Analysis. Saunders Col. Publishing, New York 1985. D.Harvey: Modern Analytical Chemistry. McGraw Hill, Boston, 2000.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 507					
A	B	C	D	E	FX
17.16	18.34	25.25	26.04	8.68	4.54
Provides: doc. RNDr. Taťána Gondová, CSc.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/AFS/05		Course name: Antique Philosophy and Present Times			
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 30					
A	B	C	D	E	FX
83.33	6.67	6.67	0.0	3.33	0.0
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof., Doc. PhDr. Peter Nezník, CSc.					
Date of last modification: 26.01.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ OBP/10		Course name: Bachelor thesis defence			
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:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 77					
A	B	C	D	E	FX
64.94	16.88	9.09	5.19	2.6	1.3
Provides:					
Date of last modification: 26.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ BPMa/10	Course name: Bachelor thesis I
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:	
Learning outcomes:	
Brief outline of the course:	
Recommended literature:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 86	
abs	n
100.0	0.0
Provides:	
Date of last modification: 26.02.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ BPMb/10	Course name: Bachelor thesis II
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of credits: 6	
Recommended semester/trimester of the course: 6.	
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: 83	
abs	n
100.0	0.0
Provides:	
Date of last modification: 26.02.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ BP1a/04	Course name: Bachelor Work
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:	
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:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 384	
abs	n
100.0	0.0
Provides:	
Date of last modification: 03.02.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ BP1b/04	Course name: Bachelor Work
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present	
Number of credits: 6	
Recommended semester/trimester of the course: 6.	
Course level: I.	
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:	
Course language:	
Notes:	
Course assessment Total number of assessed students: 387	
abs	n
99.48	0.52
Provides:	
Date of last modification: 03.02.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ MINU/03		Course name: Basis of Mineralogy			
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: 4.					
Course level: I.					
Prerequisites: ÚCHV/VCHU/10 or ÚCHV/ZAC2/10 or ÚCHV/VACH/10 or ÚCHV/CHG/09 or ÚCHV/ZCF/03					
Conditions for course completion: Verification of theoretical knowledge and recognizing minerals. Semester project, practical test from recognizing of minerals, optional oral examination.					
Learning outcomes: To recognize the beauty of nature and to obtain basic knowledge from mineralogy. To familiarize students with properties of usual minerals and to recognize these minerals.					
Brief outline of the course: Basic terms and definitions, origin of minerals in nature. Basis of morphological and structural crystallography: characteristic properties of crystals, crystallographic laws, crystal structure, unit cells and their parameters, crystallographic systems with examples of minerals. Crystallochemistry: types of bonds and structures and their effect on the properties of minerals. Physical properties of minerals and their utilize in minerals classification. Basis of genetic and systematic mineralogy. Structure of silicates.					
Recommended literature: M. Košuth: Mineralógia. Elfa, s.r.o. Košice, 2001 V. Radzo: Mineralógia, Alfa Bratislava, 1987.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 40					
A	B	C	D	E	FX
67.5	25.0	7.5	0.0	0.0	0.0
Provides: doc. RNDr. Ivan Potočný, PhD.					
Date of last modification: 03.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ BCHU/03	Course name: Biochemistry
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: 5	
Recommended semester/trimester of the course: 5.	
Course level: I.	
Prerequisites: ÚCHV/VCHU/10 or ÚCHV/VCHU/15 or ÚCHV/VACH/10	
Conditions for course completion: test + oral examination	
Learning outcomes: The aim of biochemistry teaching is to acquire knowledge in the field of living organisms on the basis of their molecular structure and metabolism.	
Brief outline of the course: 1. Protein Structure and Function, Exploring proteins 2. DNA and RNA and the Flow of Genetic Information, Exploring genes 3. Enzymes: Basic Concepts and Kinetics, Catalytic Strategies and Regulatory Strategies 4. Carbohydrates (Monosaccharides, Disaccharides, Polysaccharides – Functions and Properties) 5. Lipids and Cells Membranes, Membrane Channels and Pumps 6. Metabolis: Basic Concepts and Design, Signal-Transduction Pathways 7. Glycolysis and Gluconeogenesis, Glycogen Metabolism 8. The Citric Acid Cycle and Glyoxylate Cycle 9. Oxidative Phosphorylation, The Light Reactions of Photosynthesis 10. The Calvin Cycle and the Pentose Phosphate Pathway 11. Fatty Acids Metabolism, Urea Cycle 12. DNA Replication, Transcription (RNA Synthesis) 13. Protein Synthesis & Degradation, the Integration of Metabolism	
Recommended literature: Škárka: Biochémia. Alfa, 1992 Voet a Voetová: Biochemie. Victoria Publishing, Praha, 1994 Stryer, L.: Biochemistry, W.H. Freeman and Company, New York, 1988	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 876					
A	B	C	D	E	FX
16.44	18.49	21.12	21.92	19.06	2.97
Provides: doc. RNDr. Erik Sedlák, PhD., RNDr. Nataša Tomášková, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ PBCHU/03		Course name: Biochemistry Practical			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚCHV/BCHU/03					
Conditions for course completion: Protocols + 75 % continuous evaluation.					
Learning outcomes:					
Brief outline of the course: The most important biochemical laboratory methods. The qualitative tests for amino acids and proteins. Time-dependent course of enzyme-catalyzed reaction: determination of enzymatic activity, determination of the first order rate constant, calculations of math models (examples), effect of a substrate concentration on initial rate of reaction, determination of Km and Vmax for urease. Isolation and detection of nucleic acids.					
Recommended literature: http://kosice.upjs.sk/~kbch/					
Course language:					
Notes:					
Course assessment Total number of assessed students: 272					
A	B	C	D	E	FX
58.09	25.0	11.76	2.21	2.21	0.74
Provides: doc. RNDr. Mária Kožurková, CSc., RNDr. Nataša Tomášková, PhD., RNDr. Rastislav Varhač, PhD., RNDr. Danica Sabolová, PhD., Mgr. Eva Žilecká					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ BAC1/04		Course name: Bioinorganic Chemistry I			
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: 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion: Test or seminar works examination					
Learning outcomes: The basic knowledges about biometal interactions with biomolecules, biomaterials, biominerals, biocatalysis, metals in biology and medicine, metal-based drugs, toxic metals for biosystems and metals in the environment.					
Brief outline of the course: Metallic and non-metallic elements and their roles in biological systems (biometals, bulk biological elements, essential trace elements). Biocoordination compounds, bioligands. Biocatalyzers. Oxygen carriers and oxygen transport proteins. Photochemical process. Catalysis and regulation processes. Calcium biominerals and biomineralization. Toxic metals. Application of knowledge of bioinorganic chemistry in pharmacy, chemotherapy (e.g. platinum complexes in cancer therapy) radiodiagnostics, mineral biotechnology, ecology and in other branches of life.					
Recommended literature: 1. Shriver D. F., Atkins P. W., Overton T. L., Rourke J.P., Weller M.T., Armstrong F.A.: Shriver & Atkins. Inorganic Chemistry. Oxford University Press, Oxford 2006. 2. Kaim W., Schwederski B.: Bioinorganic Chemistry: Inorganic Elements in the Chemistry of Life. Wiley, Chichester 1998. 3. Wilkins P. C., Wilkins R. G.: Inorganic Chemistry in Biology. OCP, Oxford 1997.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 145					
A	B	C	D	E	FX
44.14	31.03	15.86	2.07	6.9	0.0
Provides: doc. RNDr. Zuzana Vargová, Ph.D.					

Date of last modification: 03.02.2014
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 1069					
A	B	C	D	E	FX
36.3	23.48	16.0	15.9	7.86	0.47
Provides: doc. RNDr. Monika Kassayová, CSc.					
Date of last modification: 13.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/ NJKK/07		Course name: Communication Competence in the 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: 42					
A	B	C	D	E	FX
57.14	14.29	7.14	4.76	14.29	2.38
Provides: Mgr. Eva Černáková, PhD.					
Date of last modification: 05.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: ontroľný písomný test, aktivita na hodine záverečný písomný test stupnica hodnotenia A 93-100, B 86 - 92, C 79-85, D 72-78, E 65-71, FX menej ako 64 Povolené max. 2 absencie počas semestra predmet končí hodnotením, možnosť jedného opravného testu	
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: 174

A	B	C	D	E	FX
36.78	22.41	18.39	9.77	8.05	4.6

Provides: PaedDr. Gabriela Bednáriková, Mgr. Silvia Marcinová, PhD.

Date of last modification: 06.02.2014

Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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, možnosť jedného opravného testu	
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: 06.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ KCHU/03		Course name: Coordination Chemistry			
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: ÚCHV/ACHU/03					
Conditions for course completion: Final written exam					
Learning outcomes: The student acquires basic knowledge on the coordination compounds, preparation, isomerism and properties of coordination compounds as well as about the chemical bonding in coordination compounds.					
Brief outline of the course: Definition and nomenclature of coordination compounds. Central atom and ligands, coordination numbers. Isomerism, preparation and stability of coordination compounds, chemical bonding in coordination compounds.					
Recommended literature: J. Ribas: Coordination Chemistry, Wiley-VCH, Weinheim, 2008. J. C. Huheey, E. A. Keiter, R. L. Keiter: Inorganic Chemistry, Haper Collins, New York, 1993. G. A. Lawrance: Introduction to Coordination Chemistry, Wiley, 2010.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 60					
A	B	C	D	E	FX
56.67	23.33	13.33	3.33	3.33	0.0
Provides: prof. RNDr. Juraj Černák, CSc., RNDr. Juraj Kuchár, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ OBPC/03		Course name: Defence of bachelor thesis			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present					
Number of credits: 0					
Recommended semester/trimester of the course:					
Course level: I.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: Presentation of the thesis before the state exam committee.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 366					
A	B	C	D	E	FX
83.33	10.66	4.37	0.82	0.55	0.27
Provides:					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 495					
A	B	C	D	E	FX
12.53	10.91	17.37	22.63	27.88	8.69

Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Mária Maceková
Date of last modification: 14.02.2014
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 350					
A	B	C	D	E	FX
11.71	8.86	15.71	19.14	29.43	15.14
Provides: prof. RNDr. Stanislav Jendroľ, DrSc., RNDr. Michaela Vrbjarová					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ SL1/05		Course name: Education-related 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: 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: 337					
A	B	C	D	E	FX
39.17	31.16	16.91	4.15	1.78	6.82
Provides: PaedDr. Renáta Orosová, PhD., Mgr. Zuzana Nováková, PhD.					
Date of last modification: 04.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: test na slovnú zásobu, ústna prezentácia, záverečný písomný test, účasť na seminároch (max. 2 absencie) stupnica hodnotenia: A 93-100, B 86-92, C 79-85, D 72-78, E 65-71, FX 64 a menej	
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: 1860					
A	B	C	D	E	FX
31.72	25.54	18.28	11.94	9.52	3.01
Provides: PhDr. Helena Petruňová, CSc., PaedDr. Gabriela Bednáriková, Mgr. Marianna Škultétyová, Mgr. Silvia Marcinová, PhD.					
Date of last modification: 06.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPE/ ZSKP/05		Course name: Essentials of School Pedagogy			
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 268					
A	B	C	D	E	FX
11.19	16.42	26.49	19.03	5.6	21.27
Provides: PaedDr. Renáta Orosová, PhD.					
Date of last modification: 04.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ PCH1/00		Course name: Food chemistry			
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., II.					
Prerequisites:					
Conditions for course completion:					
Learning outcomes: Based on excursions to food plants and analytical laboratories specialized on food analysis together with own prepared projects during seminars the students should gain general overview about food chemistry, basic legal documents, additives.					
Brief outline of the course: The main categories of substances in the most important group of food. Contamination of food. Physical and chemical properties of food and chemical reactions relative to obtaining, storing and preparing of food. Analytical methods for determination of quality of the food.					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 238					
A	B	C	D	E	FX
57.56	36.55	5.46	0.0	0.0	0.42
Provides: RNDr. Dušan Koščík, CSc., RNDr. Ján Elečko					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ ZAL/10		Course name: Foundations of algorithmization			
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: 4					
Recommended semester/trimester of the course: 5.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Two tests elaborated by a computer and final test.					
Learning outcomes: To develop algorithmic thinking of students enhancing the ability to solve problems. Lead students to precise formulation of mathematical problems and to formalism of writing their solutions. To teach students to create and write algorithms from different areas of mathematics in programming languages Logo and Delphi.					
Brief outline of the course: The conception of turtle geometry and basic commands of algorithmic language Logo. Defining commands with parameters for the construction of basic geometric shapes and their combination to create more complex constructions. Algorithmic problem formulation, algorithmic constructions for writing of algorithms, creation and verification of algorithms. Algorithms in number theory, approximate calculations in the set of real numbers, iterative algorithms for solving equations in the language Delphi. The use of type array to search and algorithms for operation in number systems with different bases.					
Recommended literature: J. Hvorecký, J. Kelemen: Algoritmizácia, Alfa Bratislava, 1983. M. Tomcsányiová: Programujeme v Comenius logu, MC Bratislava, 1998. R. Ochranová: Úvod do programování, SPN Praha, 1980. S. Písek: Delphi, Začínáme programovat, Grada, 2002.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 19					
A	B	C	D	E	FX
52.63	15.79	5.26	21.05	5.26	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.
Date of last modification: 14.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ BACHZ/06		Course name: Fundamentals of Bioanalytical Chemistry			
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: 3.					
Course level: I.					
Prerequisites:					
Conditions for course completion: written test Oral examination					
Learning outcomes: Principles and theoretical foundations the application of analytical methods in bioanalysis.					
Brief outline of the course: Introduction to Bioanalytical Chemistry. Biological samples classification. Factors that affect analytes in biological samples. Collection, transport and storage of samples, the main principles of sampling, the suppressing of undesirable phenomena. Selected methods of pretreatment of biological samples. Analyzers, equipment and organization of work in a clinical laboratory. Control and management of quality in clinical laboratory. Quality manual, calibration, control, and reference materials. Validation and Good Laboratory Practice. Buffers in bioanalysis. Enzymes in bioanalysis, introduction, distribution, Mechanism of enzyme catalysis. The kinetics of enzymatic reactions with one substrate, the Michaelis constant, constant specificity, lag phase, kinetics of reactions with two substrates. Moderators of enzyme activity. Selected methods for analysis of biomolecules.					
Recommended literature: 1.Mikkelsen S.R, Cortón E.: Bioanalytical Chemistry, Wiley, 2004 2.Wilson I., Bioanalytical Separations 4, (Handbook of Analytical Separations), Elsevier, 2003 3.Lee, D.C., Webb, M. Pharmaceutical Analysis, Blackwell, 2003					
Course language:					
Notes:					
Course assessment Total number of assessed students: 52					
A	B	C	D	E	FX
34.62	26.92	28.85	5.77	0.0	3.85
Provides: doc. RNDr. Katarína Reiffová, PhD.					

Date of last modification: 03.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ PACU/03		Course name: General Course of Analytical Chemistry - Laboratory			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 4.					
Course level: I.					
Prerequisites: ÚCHV/ANCHU/03					
Conditions for course completion: Assessment					
Learning outcomes: Application of theoretical knowledge to analytical laboratory practise					
Brief outline of the course: Practical in qualitative and quantitative analysis. Qualitative analysis, separation by selective precipitation. Quantitative methods. Gravimetry, general principles of method. Volumetric methods. Preparation of accurate solutions. Indication of equivalency point. Titration curves, calculations in volumetric analysis. Acidimetry, alkalimetry. Manganometry. Iodometry. Complexometry. Selected Instrumental analytical methods.					
Recommended literature: D.Harvey: Modern Analytical Chemistry. McGraw Hill, Boston, 2000. D.A.Skoog: Principles of Instrumental Analysis. Saunders Col. Publishing, New York 1985. E.Prichard: Quality in the Analytical Chemistry Laboratory, Wiley, 1995					
Course language:					
Notes:					
Course assessment Total number of assessed students: 174					
A	B	C	D	E	FX
53.45	30.46	12.64	1.15	2.3	0.0
Provides: RNDr. Rastislav Serbin, PhD., RNDr. Jana Šandrejová, PhD., RNDr. Livia Kocúrová, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ VCHU/14		Course name: General Chemistry			
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: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: 2 written tests Oral examination.					
Learning outcomes: To provide students with knowledge about atoms, chemical bonds, physical properties of elements and compounds.					
Brief outline of the course: Main terms used in chemistry. Atoms – models of atoms, electron configuration, chemical periodicity and its effect on the properties of elements, radioactivity. Chemical bonds and intermolecular interactions. Chemical structure and physical properties of matter. State of matter. Solutions. Chemical equilibrium. Basis of chemical thermodynamics and chemical kinetics. Classification of chemical reactions. Electrochemistry.					
Recommended literature: 1. Atkins P., Jones L.: Chemical Principles, 2nd ed., Freeman, New York 2002. 2. Russel J.B.: General Chemistry, 2nd ed., McGraw Hill, London 1992.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 43					
A	B	C	D	E	FX
20.93	27.91	32.56	13.95	4.65	0.0
Provides: doc. RNDr. Vladimír Zeleňák, PhD.					
Date of last modification: 13.03.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ GEO2a/10	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: 6	
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:					
Notes:					
Course assessment Total number of assessed students: 317					
A	B	C	D	E	FX
13.56	13.88	24.92	25.87	16.4	5.36
Provides: doc. RNDr. Dušan Šveda, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/OJPV1/07		Course name: German Language for Specific Purposes - German in 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: 120					
A	B	C	D	E	FX
19.17	20.83	27.5	23.33	8.33	0.83
Provides: Mgr. Eva Černáková, PhD., Dr. rer. pol. Michaela Kováčová					
Date of last modification: 05.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KGER/ NJKG/07		Course name: Grammar in the German Language Communication			
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: Dr. rer. pol. Michaela Kováčová					
Date of last modification: 05.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/DF1/05		Course name: History of Philosophy and Philosophy of Education - Cultural and Socio-Anthropological Relations			
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 392					
A	B	C	D	E	FX
63.52	16.58	10.97	5.87	2.55	0.51
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof., Doc. PhDr. Peter Nezník, CSc.					
Date of last modification: 26.01.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/ KDF/05		Course name: Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction)			
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 10					
A	B	C	D	E	FX
50.0	20.0	10.0	0.0	10.0	10.0
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof.					
Date of last modification: 26.01.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/ FVp/04		Course name: Chapters from Philosophy 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: 5.					
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: 3					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof.					
Date of last modification: 26.01.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ CHV1/99		Course name: Chemical calculations			
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: Short written tests. Written test.					
Learning outcomes: To teach students how to calculate material balances in the systems with or without chemical processes and how to calculate examples concerning the chemical equilibrium.					
Brief outline of the course: Expression of the clear matter amount and the system composition. Stoichiometric formula. Material balances for preparation, dissolving and mixing of solutions, and for separating of mixtures. Material balances for combined processes. Chemical equations and material balances in the systems with chemical processes. Acid-Base equilibrium and the pH calculations. The solubility product and solubility.					
Recommended literature: Potočník I.: Chemické výpočty vo všeobecnej a anorganickej chémii (skriptum), PF UPJŠ, Košice, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 865					
A	B	C	D	E	FX
16.07	19.31	25.09	23.12	15.72	0.69
Provides: RNDr. Martin Vavra, PhD., doc. RNDr. Zuzana Vargová, Ph.D., Mgr. Miroslav Almáši, PhD., RNDr. Lukáš Smolko					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ISC1a/00		Course name: Cheminformatics 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.					
Prerequisites:					
Conditions for course completion: seminar project					
Learning outcomes: Introductory course aimed at introducing students to the fundamental informatics techniques for chemistry-related disciplines. The class will cover a wide range of topics, including searching chemical information on internet, searching for patent information and work with the primary and secondary literature.					
Brief outline of the course: Searching, retrieving and use of the informations in chemistry. Using of "paper" resources (primary journals, Chemical Abstracts, Beilstein). Searching chemical information on Internet (Scirus, ScienceDirect, Scopus, Web of Science, Medline, NIST) and e-journals.					
Recommended literature: 1. R.E. Maizell: How to find Chemical Information, John Wiley, New York 1998 2. Internet resources for chemistry.					
Course language: slovak language and english language					
Notes:					
Course assessment Total number of assessed students: 661					
A	B	C	D	E	FX
62.48	10.29	15.73	8.62	1.97	0.91
Provides: RNDr. Monika Tvrdoňová, PhD., RNDr. Ladislav Janovec, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/CHS/03		Course name: Chemistry			
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: ÚCHV/ACHU/03 and ÚCHV/OCHU/03 and ÚCHV/ANCHU/03 and (ÚCHV/FCHU/03 or ÚCHV/FCHU/10) and ÚCHV/BCHU/03 and ÚCHV/MUSU/03					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 175					
A	B	C	D	E	FX
22.29	25.14	24.0	17.71	8.57	2.29
Provides:					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/CAOZ/03		Course name: Chemistry of Inorganic & Organic Compounds			
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: 4.					
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 is required from both parts. Terminal examination by written form, 100 points; 50 points from inorganic part and 50 points from organic part.					
Learning outcomes: The main goal of this subject is to provide a general overview of inorganic and organic compound, including special materials, in regard to their properties and applications in the industry.					
Brief outline of the course: The compounds of some metallic and nonmetallic elements. Relationship between structure, properties and application. Natural and synthetic materials, nanomaterials on the basis of inorganic compounds. Overview of the organic compounds including natural and unnatural saccharides, peptides, lipid substances, nucleosides, terpenes and their industrial applications.					
Recommended literature: 1. Ondrejovič G. a kol.: Anorganická chémia 2, STU, Bratislava 1995. 2. Shriver D. F., Atkins P. at al.: Inorganic Chemistry. Oxford University Press, Oxford 2006. 3. K. C. Timberlake: Organic and Biological Chemistry, Benjamin Cummings Publishing Company, Inc., 2002. 4. McMurry, J. Organic chemistry, Brooks/Cole, a Thomson Learning Company, 2004.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 66					
A	B	C	D	E	FX
33.33	12.12	21.21	24.24	7.58	1.52
Provides: doc. RNDr. Mária Reháková, CSc., doc. RNDr. Miroslava Martinková, PhD.					

Date of last modification: 03.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: R UPJŠ/ IB7/14	Course name: IB7 - Štatistika pre 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., 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: 0		
abs	n	neabs
0.0	0.0	0.0
Provides:		
Date of last modification: 11.08.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KFaDF/IH1/03		Course name: Idea Humanitas 1 (General Introduction)			
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 9					
A	B	C	D	E	FX
55.56	11.11	0.0	11.11	22.22	0.0
Provides: Doc. PhDr. Peter Nezník, CSc.					
Date of last modification: 26.01.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 129					
A	B	C	D	E	FX
53.49	27.13	9.3	7.75	2.33	0.0
Provides: doc. RNDr. Stanislav Lukáč, PhD.					

Date of last modification: 14.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ IKTP/10		Course name: Information and Communication Technologies			
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: Text processing using a word processor. Processing and evaluation of information using a spreadsheet. Search, retrieval and exchange of information via the Internet. Creating presentations.					
Recommended literature: 1. Franců, M: Jak zvládnout testy ECDL. Praha : Computer Press. 2007. 160 s. ISBN 978-80-251-1485-8 2. Jančařík, A. et al.: S počítačem do Evropy – ECDL. 2. vydanie. Praha : Computer Press, 2007. 152 s. ISBN 80-251-1844-3 3. Kolektív autorov: Syllabus ECDL verzia 5.0. [on-line] [citované 9.2.2010]. Dostupné na internete: < http://www.ecdl.sk/buxus/docs//interne_informacie/Syllabus_V5.0/20090630ECDL-SyllabusV50_SK-V01_FIN.pdf > 4. Kalakay, R. et al: Informačné a komunikačné technológie - prezenčný kurz. [on-line] [citované 9.2.2010]. Dostupné na internete: < http://moodle.science.upjs.sk/course/view.php?id=90 >					
Course language:					
Notes:					
Course assessment Total number of assessed students: 970					
A	B	C	D	E	FX
66.8	17.63	6.91	3.51	1.75	3.4
Provides: Mgr. Alexander Szabari, PhD., RNDr. Jozef Studenovský, CSc., RNDr. Zuzana Bednárová, PhD., doc. Ing. Štefánia Gallová, CSc.					
Date of last modification: 03.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ IKTD/10		Course name: Information and Communication Technologies - distance learning			
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: Text processing using a word processor. Processing and evaluation of information using a spreadsheet. Search, retrieval and exchange of information via the Internet. Creating presentations.					
Recommended literature: 1. Franců, M: Jak zvládnout testy ECDL. Praha : Computer Press. 2007. 160 s. ISBN 978-80-251-1485-8 2. Jančařík, A. et al.: S počítačem do Evropy – ECDL. 2. vydanie. Praha : Computer Press, 2007. 152 s. ISBN 80-251-1844-3 3. Kolektív autorov: Syllabus ECDL verzia 5.0. [on-line] [citované 9.2.2010]. Dostupné na internete: < http://www.ecdl.sk/buxus/docs//interne_informacie/Syllabus_V5.0/20090630ECDL-SyllabusV50_SK-V01_FIN.pdf > 4. Kalakay, R. et al: Informačné a komunikačné technológie - prezenčný kurz. [on-line] [citované 9.2.2010]. Dostupné na internete: < http://moodle.science.upjs.sk/course/view.php?id=90 >					
Course language:					
Notes:					
Course assessment Total number of assessed students: 113					
A	B	C	D	E	FX
75.22	7.08	3.54	0.0	3.54	10.62
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Jozef Studenovský, CSc., RNDr. Zuzana Bednárová, PhD.					
Date of last modification: 03.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ACHU/03		Course name: Inorganic Chemistry			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present					
Number of credits: 6					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚCHV/VCHU/10 or ÚCHV/VCHU/14					
Conditions for course completion: Test in the middle and at the end of the semester. Oral examination.					
Learning outcomes: Aim of the course is to provide the students with a knowledge of systematic chemistry of non-metallic elements					
Brief outline of the course: Electronic configuration, abundance, use, physical and chemical properties, preparation, reactivity of non-metallic elements hydrogen, halogens, oxygen, sulphur, nitrogen, phosphorus, carbon, silicon, boron and rare gases. Binary and other compounds formed by these elements, their properties and reactivity. Metals and transition elements. Abundance, properties, reactivity, important compounds.					
Recommended literature: http://kosice.upjs.sk/~vladimir.zelenak/ACHU.htm (ppt slides from the lectures as a support for self study) Greenwood, N. N., Earnshaw, A: Chemistry of the Elements. Pergamon Press, Oxford, 1984 Atkins O., Overton T., Rourke J., Weller M., Armstrong F.: Inorganic Chemistry, University Press, Oxford, 2006.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 530					
A	B	C	D	E	FX
9.81	17.74	30.19	27.17	10.94	4.15
Provides: doc. RNDr. Vladimír Zeleňák, PhD.					
Date of last modification: 03.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 213					
A	B	C	D	E	FX
30.99	27.23	31.92	9.39	0.0	0.47
Provides: RNDr. Martina Hančová, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ UECH/03	Course name: Introduction to Environmental Chemistry
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: 3.	
Course level: I., II.	
Prerequisites:	
Conditions for course completion: Oral examination	
Learning outcomes: Introduction to topics in environmental chemistry and basic procedures applied for environmental protection.	
Brief outline of the course: Introduction to Environmental Chemistry Chemical aspects of pollution and environmental problems. Composition and behavior of the atmosphere. Energy balance of the Earth and climate changes. Principles of photochemistry, photoprocesses in the atmosphere. Petroleum, hydrocarbons and coal (characteristics, sources and environmental pollution). Soaps, polymers and synthetic surfactants. Haloorganics and pesticides. Environmental chemistry of some important elements (C, N, S, P, halogens, biologically important metals ...). Environmental chemistry in aqueous media. Aqueous systems, parameters, cycles and their protection. The Earth's crust (rocks, minerals, soils). Natural and artificial radioactivity, utilization. Energy and energy sources (fossil fuels, nuclear, geothermal, solar energy, wind and water energy). Solid waste disposal and recycling.	
Recommended literature: 1. Gary W. van Loon, Stephen J. Duffy : Environmental Chemistry - A Global Perspective, Oxford University Press, Oxford 2003 2. R.A. Bailey, H.M. Clark, J.P. Ferris, S. Krause, R.L. Strong : Chemistry of the Environment, Academic Press, San Diego 2002 3. G. Schwedt: The Essential Guide to Environmental Chemistry, Wiley and Sons, London 2001 4. R.N. Reeve, J.D. Barnes: General Environmental Chemistry, Wiley, London 1994 5. G. Burton, J. Holman, G. Pilling, D. Waddington: Chemical Storylines, Heinemann, Oxford, London 1994 6. www	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 189					
A	B	C	D	E	FX
48.15	19.05	16.93	9.52	5.82	0.53
Provides: RNDr. Andrea Straková Fedorková, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 344					
A	B	C	D	E	FX
21.8	11.92	17.44	15.99	20.06	12.79
Provides: doc. RNDr. Matúš Harminc, CSc., RNDr. Jana Borzová, RNDr. Veronika Hubeňáková					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 539	
abs	n
95.18	4.82
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 Zeleňák, PhD., Doc. RNDr. Jozef Hanč, PhD., RNDr. Ondrej Krídlo, PhD., Mgr. Vladislav Kolarčík, PhD., RNDr. Janetta Nestorová-Dická, PhD.	
Date of last modification: 17.02.2014	
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 488					
A	B	C	D	E	FX
12.91	16.19	20.49	24.59	14.75	11.07
Provides: RNDr. Jaroslav Šupina, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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., RNDr. Eva Ocel'áková					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 1265					
A	B	C	D	E	FX
6.17	7.75	12.02	13.04	34.78	26.25
Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD., RNDr. Jaroslav Šupina, PhD.					
Date of last modification: 14.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 791					
A	B	C	D	E	FX
8.47	8.09	12.14	18.71	36.16	16.43
Provides: doc. RNDr. Ondrej Hutník, PhD., RNDr. Lenka Halčinová, PhD., RNDr. Jaroslav Šupina, PhD.					
Date of last modification: 14.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 607					
A	B	C	D	E	FX
7.08	6.59	12.69	18.12	43.33	12.19
Provides: doc. RNDr. Ondrej Hutník, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 278					
A	B	C	D	E	FX
8.63	8.99	17.63	19.78	35.25	9.71
Provides: doc. RNDr. Božena Mihalíková, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MRUa/10		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: Continuous assessment and final test.					
Learning outcomes: To deepen and systematize the knowledge and skills of students to use appropriate methods for solving of tasks at primary and secondary school and to characterize the specific problems of mathematics teaching at primary and secondary school.					
Brief outline of the course: Basic knowledge of school mathematics, various methods of problem solving, the problems from mathematical competitions for the topics Equations and inequalities and their systems, Elementary 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] Textbooks and collections of mathematical tasks.					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 107					
A	B	C	D	E	FX
32.71	25.23	22.43	13.08	6.54	0.0
Provides: doc. RNDr. Stanislav Lukáč, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MRUb/10		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:					
Conditions for course completion: The award is based on the results of written checks carried out during the semester. 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: Stereometry. Stochastics, probability. 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] Plocki, A., Pravdepodobnosť okolo nás. Katolícka univerzita, Ružomberok 2007 [4] Učebnice a zbierky úloh z matematiky ZŠ a SŠ					
Course language:					
Notes:					
Course assessment Total number of assessed students: 77					
A	B	C	D	E	FX
42.86	10.39	31.17	7.79	7.79	0.0
Provides: doc. RNDr. Dušan Šveda, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/MRUc/10		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:					
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.					
Brief outline of the course: Basic knowledge of school mathematics. Number theory tasks, tasks to optimize, word problems.					
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:					
Notes:					
Course assessment Total number of assessed students: 81					
A	B	C	D	E	FX
23.46	41.98	23.46	9.88	1.23	0.0
Provides: doc. RNDr. Matúš Harminc, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MTM/10		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: 0					
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:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 79					
A	B	C	D	E	FX
18.99	21.52	25.32	24.05	10.13	0.0
Provides:					
Date of last modification: 26.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚMV/ MTCa/13		Course name: Mathematics I for chemists			
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: 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 final test.					
Learning outcomes: To obtain basic knowledge on functions of one variable and their properties; to be able to apply the theory in concrete exercises.					
Brief outline of the course: Functions, basic properties. Elementary functions. Continuous functions. Limits. Derivation and its geometric applications. Theorems about continuous functions. Behaviour of functions. Indefinite integrals, basic methods of integration. Definite integral and its applications.					
Recommended literature: S. Lang: A First Course in Calculus, Springer Verlag, 1998					
Course language: Slovak					
Notes:					
Course assessment Total number of assessed students: 393					
A	B	C	D	E	FX
9.67	10.43	18.07	19.85	26.21	15.78
Provides: doc. RNDr. Roman Soták, PhD., RNDr. Jana Borzová, Mgr. Timea Gábová, RNDr. Eva Oceláková					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 58					
A	B	C	D	E	FX
27.59	17.24	20.69	20.69	12.07	1.72
Provides: prof. RNDr. Katarína Cechlárová, DrSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 15.01.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 513					
A	B	C	D	E	FX
26.12	27.29	30.21	11.11	2.73	2.53
Provides: doc. RNDr. Matúš Harminc, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/OCHU/03	Course name: Organic chemistry
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present	
Number of credits: 6	
Recommended semester/trimester of the course: 2.	
Course level: I.	
Prerequisites: ÚCHV/VCHU/15 or ÚCHV/VCHU/14 or ÚCHV/VCHU/10 or ÚCHV/VACH/10	
Conditions for course completion: Two tests at lecture in 7 and 14th week. Test max 50 points. At least 25 points required. Written exam, 100 points. At least 49% of points required. Final evaluation: A 90-100 pts, B 80-89 pts, C 70-79 pts, D 60-69 pts, E 50-59 pts, FX 0-49 pts	
Learning outcomes: Basic organic chemistry course.	
Brief outline of the course: Chemical bonding Hybridization and Bonding Covalent bonds Double bonds and Triple Bonds Structural Formulas of Organic Molecules Polar Covalent Bonds and Electronegativity Constitutional Isomers Alkenes Electrophilic Additions Strong Brønsted Acids Lewis Acids (non-Proton Electrophiles) Electrophilic Halogen Reagents Other Electrophilic Reagents Reduction Oxidation Radical Additions Allylic Substitution Alkynes Addition Reactions Hydrogenation Electrophiles Hydration & Tautomerism Hydroboration Nucleophilic Addition & Reduction Acidity of Terminal Alkynes (Substitution of H) Alkyl Halides General Reactivity Substitution (of X) SN2 Mechanism SN1 Mechanism Elimination (of HX) Summary of Substitution vs. Elimination Substitution by Metals Elimination Reactions of Dihalides Alcohols Reactions of Alcohols Substitution of the Hydroxyl H Substitution of the Hydroxyl Group Elimination of Water Oxidation of Alcohols Reactions of Phenols Acidity of Phenols Ring Substitution of Phenols Oxidation to Quinones Aromatic compounds Electrophilic Substitution A Substitution Mechanism Reactions of Substituted Benzenes Reaction Characteristics Reactions of Disubstituted Rings Reactions of Substituent Groups Nucleophilic Substitution, Elimination & Addition Reactions Amines Basicity of Nitrogen Compounds Acidity of Nitrogen Compounds Important Reagent Bases Reactions of Amines Electrophilic Substitution at Nitrogen Preparation of 1°-Amines Preparation of 2° & 3°-Amines Reactions with Nitrous Acid Reactions of Aryl Diazonium Intermediates Elimination Reactions of Amines Oxidation States of Nitrogen Basic information: Aldehydes & Ketones Carboxylic Acids Carboxylic Derivatives Natural products	
Recommended literature: 1. on-line ppt presentation in MOODLE, moodle.science.upjs.sk 2. Organic Chemistry, Clayden, Greeves Warren & Wothers, Oxford University Press, 2010 3. Organic Chemistry, Solomon, Wiley, 2009	

Course language:					
Notes:					
Course assessment					
Total number of assessed students: 556					
A	B	C	D	E	FX
3.6	8.27	14.75	20.86	47.84	4.68
Provides: prof. RNDr. Jozef Gonda, DrSc., RNDr. Slávka Hamuláková, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ POCHU/03		Course name: Organic chemistry - Lab.			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 5					
Recommended semester/trimester of the course: 3.					
Course level: I.					
Prerequisites: ÚCHV/OCHU/03					
Conditions for course completion: Two tests 2x25 p., twelve reports 12x2 p., laboratory skills 12 p., short quizzes and questions 14 p. A 100 p. in total. Grades: A: 91-100b, B: 81-90b, C: 71-80b, D: 61-70b, E: 51-60b, Fx: 0-50b. Based on continuous evaluation.					
Learning outcomes: Students will become familiar with the basic isolation and purification methods used in a synthetic laboratory. Students should master basic laboratory technique and be able to apply the theoretical knowledge from the basic course of organic chemistry in simple synthetic projects.					
Brief outline of the course: Preparation, isolation, purification and identification of organic compounds. The emphasis is on gaining the experimental skills in synthesis of organic compounds, distillation, extraction, crystallization, sublimation and thin-layer chromatography.					
Recommended literature: 1. Handout with experimental procedures http://kekule.science.upjs.sk/pochu . 2. Organic chemistry lectures.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 282					
A	B	C	D	E	FX
33.33	26.95	21.99	12.06	5.67	0.0
Provides: RNDr. Jana Špaková Raschmanová, PhD., RNDr. Dávid Maliňák, PhD., RNDr. Slávka Hamuláková, PhD., RNDr. Martin Walko, PhD., RNDr. Zuzana Kudličková, PhD., RNDr. Mária Vilková, PhD., RNDr. Ladislav Janovec, PhD., RNDr. Ján Elečko					
Date of last modification: 03.02.2014					

Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ FCHU/10		Course name: Physical Chemistry			
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: 4.					
Course level: I.					
Prerequisites: ÚCHV/VCHU/14 or ÚCHV/VCHU/10 or ÚCHV/VACH/10					
Conditions for course completion: Written test Examination					
Learning outcomes: To provide the students with basic knowledge of physical chemistry.					
Brief outline of the course: Fundamental concepts of thermodynamics, thermochemistry, chemical equilibrium, phase equilibria and diagrams, laws for ideal gas and reals gases, liquids, solutions, solutions of electrolytes. Electrochemistry: ionics and electrodicts. Electrodes and electrochemical cells, corrosion. Chemical kinetics, catalysis. Adsorption.					
Recommended literature: T. Engel, P. Reid: Physical Chemistry, Pearson Educat. Inc., San Francisco 2006 P.W. Atkins: Physical Chemistry, Oxford University Presss, Oxford 1986, 1990, 1996 W.J. Moore: Physical Chemistry, Longman, London 1972 and newer editions					
Course language:					
Notes:					
Course assessment Total number of assessed students: 131					
A	B	C	D	E	FX
29.77	15.27	13.74	18.32	16.79	6.11
Provides: RNDr. Andrea Morovská Turoňová, PhD., Mgr. Ján Macko					
Date of last modification: 11.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚFV/ FPCh/08		Course name: Physics for Chemists			
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: 1.					
Course level: I.					
Prerequisites:					
Conditions for course completion: Test-papers (2). Exam.					
Learning outcomes: Completing the course students will get knowledge of fundamental physical laws and will understand their relation to chemistry.					
Brief outline of the course: Kinematics and dynamics of mass point, rigid bodies and fluids. Structure and properties of materia. The kinetic theory of gases and the foundations of thermodynamics. Structure and properties of liquids. Mechanical properties of solids, Hooke's Law. Stationary el. field and constant electric current. Magnetic field. Optics.					
Recommended literature: 1. V. Hajko, J. Daniel-Szabó: Základy fyziky. Veda, Bratislava, 1980. 2. Š. Veis, J. Maďar, V. Martišovič: Všeobecná fyzika 1, Mechanika a molekulová fyzika. Alfa, Bratislava, 1978. 3. P. Čičmanec: Všeobecná fyzika 2, Elektrina a magnetizmus. Alfa, Bratislava, 1980. 4. R.P. Feynman, R.B. Leighton, M. Sands: Feynmanove prednášky z fyziky 1-5. Alfa, Bratislava, 1985. 5. V. Hajko a kol.: Fyzika v príkladoch. Alfa, Bratislava, 1983.					
Course language: Slovak language.					
Notes:					
Course assessment Total number of assessed students: 346					
A	B	C	D	E	FX
18.79	26.59	29.48	15.03	9.83	0.29
Provides: Mgr. Gregor Bánó, PhD., RNDr. Zuzana Jurašeková, PhD.					

Date of last modification: 10.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚCHV/ADP/03		Course name: Porous materials and their applications					
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: 6.							
Course level: I., II., III.							
Prerequisites:							
Conditions for course completion: Written test in the middle and the end of the semester.							
Learning outcomes: To make the acquaintance of various types of advanced porous solids and basic methods for their investigation. To get up the students with the methods used in characterisation of specific surface area and pore size of different types of porous materials.							
Brief outline of the course: Terminology and principal terms associated with powders, porous solids and adsorption. Methodology of adsorption at the gas-solid interface, liquid-solid interface. Assessment of surface area and porosity. Inorganic materials (active carbon, metal oxides, zeolites, clay minerals, new advanced materials) and phenomenon of adsorption. Application in the industry and everyday life.							
Recommended literature: 1. F. Rouquerol, J. Rouquerol, K. Sing: Adsorption by powders and porous solids, Academic press, London, UK, 1999 2. S. J. Gregg, K.S.W. Sing: Adsorption, surface area and porosity, Academic Press, London,, UK, 1982. 3. V. Zelenák: Adsorption and porosity of solid substances, internal study text, PF UPJŠ, 2007.							
Course language:							
Notes:							
Course assessment Total number of assessed students: 49							
A	B	C	D	E	FX	N	P
81.63	10.2	4.08	0.0	0.0	0.0	0.0	4.08
Provides: doc. RNDr. Vladimír Zelenák, PhD.							
Date of last modification: 03.02.2014							
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.							

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/PACHU/03		Course name: Practical from Inorganic Chemistry			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 2.					
Course level: I.					
Prerequisites: ÚCHV/VCHU/14 or ÚCHV/VCHU/15 or ÚCHV/VCHU/10 or ÚCHV/VACH/10					
Conditions for course completion:					
Learning outcomes: The practical acquirements at preparation and study of inorganic compounds and their physico-chemical properties by common laboratory techniques.					
Brief outline of the course: The utilization of common laboratory techniques for preparation of elements (H ₂ , O ₂ , Cu, Ni), oxides(CO ₂ , Al ₂ O ₃ ·xH ₂ O), nitrides(Mg ₃ N ₂), acids (HNO ₃ , H ₃ BO ₃), salts((NH ₄) ₂ SO ₄ , KMnO ₄), binary salts(NH ₄)Fe(SO ₄) ₂ ·12H ₂ O), halides (CuCl, CuCl ₂ ·2H ₂ O, SnI ₄ , CuBr ₂) and coordination compounds ([Cr ₂ (CH ₃ COO) ₄ (H ₂ O) ₂], [CoCl ₂ (en) ₂]Cl, [Cu(NH ₃) ₄]SO ₄ ·H ₂ O, K ₃ [Al(C ₂ O ₄) ₃]·3H ₂ O).					
Recommended literature: Z. Vargová, J. Kuchár: Praktikum z anorganickej chémie, Košice, 2008 M. Reháková, M. Dzurillová, V. Zeleňák, V. Urvichiarová: Laboratórna technika, PF UPJŠ, Košice, 1999					
Course language:					
Notes:					
Course assessment Total number of assessed students: 337					
A	B	C	D	E	FX
44.81	28.49	18.99	3.26	2.97	1.48
Provides: RNDr. Juraj Kuchár, PhD., RNDr. Lukáš Smolko, Mgr. Romana Smolková, RNDr. Martin Vavra, PhD., Mgr. Veronika Farkasová					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/ PFCU/03		Course name: Practical in Physical Chemistry			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present					
Number of credits: 4					
Recommended semester/trimester of the course: 5.					
Course level: I., II.					
Prerequisites:					
Conditions for course completion: Approved laboratory reports Assessment					
Learning outcomes: Theoretical principles, description of each technique and appropriate physical chemistry experiments.					
Brief outline of the course: Experimental verification of theoretical knowledge on thermodynamics, thermochemistry, chemical equilibria (determination of enthalpy, phase diagrams), colligative properties (cryoscopy, ebullioscopy), adsorption. Experimental verification of theoretical knowledge on electrochemistry (conductivity, dissociation constants, activity coefficients, electromotive force of galvanic cell, Daniell cell, potentials, polarography) and chemical kinetics (determination of rate constants).					
Recommended literature: B.P. Levitt: Findlay's Practical Physical Chemistry, Longman, London 1973 W.J. Moore: Physical Chemistry, Longman, London 1972 P.W. Atkins: Physical Chemistry, Oxford University Press, Oxford, New York 2002					
Course language:					
Notes:					
Course assessment Total number of assessed students: 211					
A	B	C	D	E	FX
68.25	23.7	7.11	0.95	0.0	0.0
Provides: RNDr. František Kaľavský, RNDr. Andrea Morovská Turoňová, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 264					
A	B	C	D	E	FX
7.58	14.39	16.67	25.0	25.76	10.61
Provides: doc. RNDr. Valéria Skřivánková, CSc., RNDr. Martina Hančová, PhD.					

Date of last modification: 14.02.2014
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KPPaPZ/PPZBc/12		Course name: Psychology and Health Psychology (Bc. study)			
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: 4					
Recommended semester/trimester of the course: 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: 92					
A	B	C	D	E	FX
14.13	20.65	25.0	28.26	11.96	0.0
Provides: PhDr. Anna Janovská, PhD., PhDr. Karolína Barinková, PhD., Mgr. Lucia Hricová					
Date of last modification: 04.02.2014					
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 15.01.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 79					
A	B	C	D	E	FX
5.06	18.99	25.32	25.32	22.78	2.53
Provides: prof. RNDr. Danica Studenovská, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 173					
A	B	C	D	E	FX
20.81	16.76	19.08	17.92	23.12	2.31
Provides: prof. RNDr. Jozef Doboš, CSc.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 111					
A	B	C	D	E	FX
80.18	5.41	9.01	2.7	2.7	0.0
Provides: RNDr. Ingrid Semanišínová, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 128					
A	B	C	D	E	FX
67.19	12.5	10.16	7.03	3.13	0.0
Provides: RNDr. Ingrid Semanišinová, PhD.					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, PhD.					

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚCHV/ASM/03	Course name: Separation Methods
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: 6.	
Course level: I.	
Prerequisites: (ÚCHV/ANCHU/03 or ÚCHV/ANCHE/09 or ÚCHV/ANCH1b/03) and (ÚCHV/PAEC/03 or ÚCHV/PANCH/06 or ÚCHV/PANCHE/09 or ÚCHV/PACU/03)	
Conditions for course completion: Examination	
Learning outcomes: Survey of basic principles, theoretical background and applications of separation methods in research and analytical practice.	
Brief outline of the course: Basic principles, classification, theory and applications of separation methods. Extraction - LLE, SPE, SPME. Chromatographic methods - theory, classification. Gas chromatography, retention mechanisms, stationary phases and their selection. Instrumentation, detectors in GC. Data evaluation - qualitative and quantitative analysis. High-performance liquid chromatography, principles, classification. Stationary and mobile phases in LC, instrumentation. Applications. Comparison of GC and HPLC methods. Planar chromatographic methods - TLC, HPTLC, PC. Electrophoretic techniques - CE, ITP, HPCE. MEKC - micellar electrokinetic capillary chromatography. Lab-on-a-Chip (LOC), TAS, electrophoresis on a chip, principles and applications.	
Recommended literature: Krupčík, J.: Separačné metódy, SVŠT CHTF, Bratislava 1983. Skoog D. A., Leary J. J.: Principles of instrumental analysis. Saunders College Publishing, New York 1997. Pawliszyn J., Lord H. L.: Handbook of sample preparation, Wiley 2010. Churáček J., Jandera P.: Úvod do vysokoúčinné kapalinové chromatografie, SNTL, Praha 1984.	
Course language:	
Notes:	

Course assessment					
Total number of assessed students: 392					
A	B	C	D	E	FX
28.32	25.51	25.0	11.99	6.38	2.81
Provides: doc. RNDr. Taťána Gondová, CSc.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 7160		
abs	n	neabs
88.42	7.82	3.76
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, Mgr. Dávid Kaško		
Date of last modification: 15.01.2014		
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zeleňák, 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: 6364		
abs	n	neabs
84.95	11.06	3.99
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, Mgr. Dávid Kaško		
Date of last modification: 15.01.2014		
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 4191		
abs	n	neabs
89.91	4.72	5.37
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, Mgr. Dávid Kaško		
Date of last modification: 15.01.2014		
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 3363		
abs	n	neabs
86.14	6.78	7.08
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, Mgr. Dávid Kaško		
Date of last modification: 15.01.2014		
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, PhD.		

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚCHV/MUSU/03		Course name: Structure determination - spectroscopic methods			
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: 8					
Recommended semester/trimester of the course: 6.					
Course level: I.					
Prerequisites: ÚCHV/ACHU/03 and ÚCHV/ANCHU/03 and ÚCHV/OCHU/03					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course: Fundamentals of molecular spectroscopy and magnetic properties study, as powerful tools for structure determination in chemistry. Those are ultraviolet, visible, infrared and Raman spectroscopy, mass spectrometry and methods based on magnetic resonance (¹ H NMR, ¹³ C NMR).					
Recommended literature: 1. M. Hesse, H. Meier, B. Zeeh: Spectroscopic Methods in Organic Chemistry. Thieme, NY 1997. 2. L.G.Wade, Jr.: Organic Chemistry. Prentice Hall International, Inc. Englewood Cliffs, New Jersey 1995.					
Course language:					
Notes:					
Course assessment Total number of assessed students: 231					
A	B	C	D	E	FX
20.35	26.41	30.3	17.75	5.19	0.0
Provides: doc. RNDr. Ján Imrich, CSc., RNDr. Jana Špaková Raschmanová, PhD., RNDr. Monika Tvrdoňová, PhD., RNDr. Juraj Kuchár, PhD.					
Date of last modification: 03.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 47					
A	B	C	D	E	FX
97.87	2.13	0.0	0.0	0.0	0.0
Provides:					
Date of last modification: 14.02.2014					
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zelenák, 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: 63	
abs	n
41.27	58.73
Provides: Mgr. Peter Bakalár, PhD.	
Date of last modification: 15.01.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, 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: 185	
abs	n
41.62	58.38
Provides: Mgr. Marek Valanský	
Date of last modification: 15.01.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚMV/ SZP/10	Course name: Thesis related seminar
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:	
Learning outcomes: To provide students with basic information concerning writing the text of thesis and the presentation of thesis results.	
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: http://www.upjs.sk/pracoviska/univerzitna-kniznica/zaverecne-prace/	
Course language: Slovak	
Notes:	
Course assessment Total number of assessed students: 100	
abs	n
100.0	0.0
Provides: doc. RNDr. Dušan Šveda, CSc.	
Date of last modification: 14.02.2014	
Approved: doc. RNDr. Matúš Harminc, CSc., doc. RNDr. Vladimír Zeleňák, 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: 59	
abs	n
25.42	74.58
Provides: PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc.	
Date of last modification: 15.01.2014	
Approved: doc. RNDr. Matúš Harminec, CSc., doc. RNDr. Vladimír Zelenák, PhD.	