University: P. J. Šafárik University in Košice								
Faculty: Facult	y of Scienc	9						
Course ID: ÚIN ANP/15	NF/ Cou	Course name: Algorithmic unsolved problems						
Course type, sc Course type: 1 Recommended Per week: 2 / 2 Course metho	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 crea	lits: 4							
Recommended	semester/t	rimester of the cou	rse: 2.					
Course level: II	-							
Prerequisities:								
Conditions for	course con	pletion:						
Learning outco To introduce the given problem.	mes: e student int	o most important re	sults about non-exi	stence of an algor	rithm for solving			
undefinability of unsolvability	of truth in for solvability istence of a	ormalized arithmeth of particular mather solution of Diopha	ic. Godel incomple natical problems. N ntine equations. Re	etness theorem. Non-existence of eduction of probl	an algorithm for ems and degrees			
 Recommended literature: J. Barwise ed., Handbook of Mathematical Logic, North Holland 1977S. C. Kleene, Introduction to the Metamathematics, Van Nostrand 1952, ruský preklad Moskva 1957. E. Mendelson, Introduction to Mathematical Logic, Van Nostrand 1963, ruský preklad Nauka Moskva 1976. M. Davis, Hilbert's Tenth Problem is Unsolvable, Amer. Math. Monthly,1973, 233269. Ju.V. Matijasevič, Diofantovy Množestva, Usp. Mat. Nauk, 27 (1972), 185222 L. Bukovský, Algoritmicky neriešiteľné problémy, učebný text v elektronickej forma na sieti Novel PE LIPIŠ Košice 2003 								
Course language:								
Notes:								
Course assessment Total number of assessed students: 1								
А	A B C D E FX							
100.0	100.0 0.0 0.0 0.0 0.0							
Provides: doc. RNDr. Stanislav Krajči, PhD.								
Date of last mo	dification:	03.05.2015						

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J.	. Šafárik Univers	ity in Košice				
Faculty: Faculty	y of Science					
Course ID: KFa AFS/05	KFaDF/ Course name: Ancient 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 cred	lits: 2					
Recommended	semester/trimes	ster of the cours	e: 2.			
Course level: II	-					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessment Total number of assessed students: 30						
А	A B C D E FX					
83.33	83.33 6.67 6.67 0.0 3.33 0.0					
Provides: Doc. PhDr. Peter Nezník, CSc.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science	-			
Course ID: ÚMV/ ATG/13Course name: Applied graph theory					
Course type, so Course type: Recommender Per week: 2 / Course metho	cope and the met Lecture / Practice d course-load (h 1 Per study perio od: present	thod: ours): od: 28 / 14			
Number of cre	dits: 5				
Recommended	semester/trimes	ster of the cours	e: 1.		
Course level: I	[.				
Prerequisities:					
Conditions for Based on result	course completi s of oral exam.	on:			
Learning outco To provide an c sciences.	omes: overview of graph	theory applicati	ons in computer	r science and othe	r natural / social
Brief outline of The graph mod testing, visualiz graph problems	f the course: lels of real-world ation and colouring Basics of proba	problems. The ng algorithms an bility method in	elements of con d heuristics. Poly graph theory.	nplex network an ynomial instances	alysis. Planarity of NP-complete
Recommended U. Brandes, T.	literature: Erlebach: Networ	rk analysis. Meth	nodological Fou	ndations, Springe	r, 2005.
Course langua Slovak or Engl	ge: ish				
Notes:					
Course assessment Total number of assessed students: 8					
А	В	С	D	E	FX
0.0	50.0	12.5	12.5	25.0	0.0
Provides: doc. RNDr. Tomáš Madaras, PhD.					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Mirko Horňák, CSc.					
<u>I</u>					

University: P. J.	. Šafárik Univer	sity in Košice					
Faculty: Faculty	y of Science						
Course ID: ÚM ALA/10	V/ Course name: Applied linear 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 crea	lits: 5						
Recommended	semester/trime	ster of the cours	e: 1.				
Course level: II	•						
Prerequisities:							
Conditions for According to te	course complet sts and to the ex	ion: am.					
Learning outco To obtain basic	mes: knowledge on li	inear algebra; to b	be able to apply the	he theory in conc	crete excercises.		
Brief outline of Matrices over Jordan normal pseudoinverse r	the course: Euclidean ring form. Function natrices and the	gs, canonical for s of matrices, se ir application.	orms. Polynomia quences, series.	al matrices. Sin Inversion of sir	milar matrices. ngular matrices,		
Recommended literature: H.E.Rose: Linear Algebra, A Pure Mathematical Approach, Birkhäuser Verlag, 2002. D.Serre: Matrices, Theory and applications, Springer Verlag, 2002. http://www.cs.ut.ee/~toomas l/linalg/							
Course language: Slovak							
Notes:							
Course assessment Total number of assessed students: 42							
А	В	C	D	Е	FX		
33.33	33.33 7.14 26.19 4.76 28.57 0.0						
Provides: prof. RNDr. Danica Studenovská, CSc.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J. Šafárik Uni	versity in Košice							
Faculty: Faculty of Science								
Course ID: ÚINF/ Course APA1/15	F/ Course name: Approximation algorithms							
Course type, scope and the Course type: Lecture / Pra- Recommended course-loa Per week: 2 / 1 Per study p Course method: present	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/tr	imester of the cours	e: 3.						
Course level: II.								
Prerequisities:								
Conditions for course com	pletion:							
Learning outcomes: To learn basic conceptions error probability.	of randomized algor	ithms and to cla	ssify the algorith	ims due to their				
Brief outline of the course: Basic notions of Probability Las Vegas algorithms. One Carlo algorithms. Two side algorithms with polynomia problem, approximation al problems and approximation approximations. FPTAS. PT	Brief outline of the course: Basic notions of Probability Theory. Basic randomized computing models and its characterisations. Las Vegas algorithms. One sided error Monte Carlo algorithms. Two sided bounded error Monte Carlo algorithms. Two sided unbounded error Monte Carlo algorithms. Classes of randomized algorithms with polynomial time complexity and relationships between them. Optimisation problem, approximation algorithm, relative error, approximation ratio. Special optimisation problems and approximation solutions. Classification of optimisation problems based upon their approximations. FPTAS. PTAS. TSP problem and its relaxations. Unapproximability.							
Recommended literature:								
Course language:								
Notes:								
Course assessment Total number of assessed students: 92								
A B	C	D	Е	FX				
25.0 14.13	25.0 14.13 19.57 15.22 25.0 1.09							
Provides: prof. RNDr. Viliam Geffert, DrSc., RNDr. Ondrej Krídlo, PhD.								
Date of last modification: 03.05.2015								
Approved: prof. RNDr. Mirko Horňák, CSc.								

University: P. J. Šafá	University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚINF/ KKV1/15	Course ID: ÚINF/ Course name: Classical and quantum computations KKV1/15						
Course type, scope a Course type: Lectur Recommended cour Per week: 3 / 1 Per Course method: pre	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 seme	ster/trimester of the course: 3.						
Course level: II.							
Prerequisities:							
Conditions for cours Written work Writen and oral exam	e completion:						
Learning outcomes: To provide informati and quantum models	Learning outcomes: To provide information on quantum computer and quantum computations. To compare classical and quantum models and methods.						
Brief outline of the c The basics of class algorithms, probabili an algorithm. Introd superoperators), univ factoring algorithm, a quantum analogue of	Brief outline of the course: The basics of classical theory of computation: Turing machines, Boolean circuits, parallel algorithms, probabilistic computation, NP-complete problems, and the idea of complexity of an algorithm. Introduction of general quantum formalism (pure states, density matrices, and superoperators), universal gate sets and approximation theorems. Grover's algorithm, Shor's factoring algorithm, and the Abelian hidden subgroup problem. Parallel quantum computation, a quantum analogue of NP-completeness and quantum error-correcting codes						
 Recommended literature: 1. BERMAN,G.P., DOOLEN,G.D., MAINIERI, R., TSIFRINOVIC, V.I. Introduction to Quantum Computers. World Scientific, 2003. 2. GRUSKA, J. Quantum Computing. McGraw-Hill, 1999. 3. JOHNSON, G. A Shortcut Through Time: The Path to the Quantum Computer, Knopf 2003. 4. KITAEV, A.Y., SHEN, A.H., VYALYI, M.N. Classical and Quantum Computation. American Mathematical Society, 2002. 5. NIELSEN, M.A., CHUANG, I.L. Quantum Computation and Quantum Information. Cambridge University Press, 2000. 6. HIRVENSALO, M., Quantum Computing, Springer 2004 							
Course language:							
Notes:							
L							

Course assessment Total number of assessed students: 80							
А	A B C D E FX						
23.75	23.75 33.75 11.25 17.5 10.0 3.75						
Provides: doc. RNDr. Gabriel Semanišin, PhD., RNDr. Zuzana Bednárová, PhD.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J.	. Šafárik Univers	ity in Košice					
Faculty: Faculty	y of Science						
Course ID: ÚIN KMU1/15	NF/ Course na	<i>F</i> / Course name: Coding and multimedial data transition					
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 crea	lits: 4						
Recommended	semester/trimes	ster of the cours	e: 1., 3.				
Course level: I.	, II.						
Prerequisities:							
Conditions for	course completi	on:					
Learning outco	mes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Notes:							
Course assessment Total number of assessed students: 7							
А	В	С	D	Е	FX		
14.29	14.29 0.0 28.57 57.14 0.0 0.0						
Provides: doc. RNDr. Stanislav Krajči, PhD., doc. RNDr. Jozef Jirásek, PhD.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University in Košice						
nce						
se ID: ÚMV/ Course name: Combinatorial algorithms						
the method: Practice ·load (hours): dy period: 42 / 14 nt						
r/trimester of the course: 2.						
ompletion:						
nderstand the close tie between the theoretical and algorithmic aspects of I to show how algorithms can be extacted from theorems. Ability in proving						
Se: Ims and complexity. Sorting algorithms. Search algorithms. Greedy eness. Generating all spanning trees of a graph. Minimum spanning tree problem. rtest path problem and its analogues. The most reliable path. The largest with the largest expected capacity. dians. on to networks, the max-flow min-cut theorem. Related problems. natchings in bipartite graphs. Maximum matchings in general graphs. nment problems. nese postman's problem.						
re: ellermann: Applied and Algorithmic Graph Theory, McGraw-Hill, Inc. h Theory - An Algorithmic Approach, Academic Press, New York 1975 n 1978). s, Networks, and Algorithms, Springer-Verlag Berlin 2005. goritmy, Veda Bratislava 1983. Thulasiraman: Graphs, networks, and algorithms. John Wiley and Sons,						

Slovak							
Notes:	Notes:						
Course assessment Total number of assessed students: 85							
А	B C D E FX						
37.65	37.65 18.82 20.0 10.59 11.76 1.18						
Provides: prof. RNDr. Stanislav Jendrol', DrSc., Mgr. Juraj Valiska							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

Encyltry Encyltry of Science						
racuny: racuny of Science						
Course ID: ÚMV/ KDZ/10Course name: Combinatorial designs						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present						
Number of credits: 4						
Recommended semester/trimester of the course: 3.						
Course level: II.						
Prerequisities:						
Conditions for course completion: Based on results of oral exam.						
Learning outcomes: To present the basics of theory of combinatorial designs and their applications in sciences.						
Brief outline of the course: 2-designs, balanced designs. Symmetric designs, Hadamard matrices, finite projective planes. Steiner systems.						
Recommended literature: I. Anderson, I. Honkala: A short course in combinatorial designs, http://www.utu.fi/~honkala/ cover.html D.R. Stinson: Combinatorial Designs: Constructions and Analysis, Springer 2004 WD Wallis: Combinatorial designs, Marcel Dekker 1988						
Course language: Slovak or English						
Notes:						
Course assessment Total number of assessed students: 68						
A B C D E FX						
20.59 25.0 29.41 19.12 5.88 0.0						
Provides: doc. RNDr. Tomáš Madaras, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafár	rik Univers	ity in Košice			
Faculty: Faculty of S	cience				
Course ID: KPPaPZ/KK/07	e ID: Z/KK/07 Course name: Communication and Cooperation				
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 seme	ster/trimes	ster of the course: 3.			
Course level: II.					
Prerequisities:					
Conditions for cours	e completi	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of assessed students: 281					
abs	abs n z				
98.22 1.78 0.0					
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Mirko Horňák, CSc.					

University: P. J. Šafár	ik University in Košice
Faculty: Faculty of So	cience
Course ID: ÚINF/ VYZ1/15	Course name: Computational complexity
Course type, scope an Course type: Lectur Recommended cour Per week: 2 Per stue Course method: pre	nd the method: e rse-load (hours): dy period: 28 sent
Number of credits: 4	
Recommended semes	ster/trimester of the course: 1.
Course level: II.	
Prerequisities:	
Conditions for cours Oral examination.	e completion:
Learning outcomes: To give the students completeness.	the theoretical background in computational complexity and theory of NP-
Brief outline of the conditional deterministic and the Deterministic simulated another NP-completed satisfiability, 3-colorated balancing, Space be Savitch theorem. Close Complete problems for the stated of t	ourse: nondeterministic algorithms with polynomial time, NP-completeness. ion of a nondeterministic Turing machine. Satisfiability of Boolean formulae. e problems: satisfiability of a formula in a conjunctive normal form, 3- ability of a graph, 3-colorability of a planar graph, knapsack problem, bounded computations, classes L, NL, PSPACE. Deterministic simulation - sure under complement. or classes NL, P, and PSPACE.
Recommended litera J.E. Hopcroft, R.Moty computation, Addisor M. Sipser: Introductio L.A.Hemaspaandra, M science, Springer-Ver S. Arora, B. Barak: C 2009. G.Brassard, P.Bradley D.P.Bovet, P.Crescenz C. Calude and J. Hror and A. Salomaa, Hand	ture: wani, J.D. Ullman: Introduction to automata theory, languages, and n-Wesley, 2007. on to the Theory of Computation, Thomson, 2nd edition, 2006. M.Ogihara: Complexity theory companion, EATCS series, texts in computer lag, 2002. omputational Complexity: A Modern Approach, Cambridge Univ. Pess, Y: Fundamentals of algorithmics, Prentice Hall, 1996. zi: Introduction to the theory of complexity, Prentice Hall, 1994. nkovič: Complexity: A Language-Theoretic Point of View, in G. Rozenberg dbook of Formal Languages II, Springer, 1997.
Course language:	
Notes:	

Course assessment Total number of assessed students: 261							
A B C D E FX							
57.09	14.94	10.73	8.43	8.81	0.0		
Provides: prof.	Provides: prof. RNDr. Viliam Geffert, DrSc.						
Date of last modification: 03.05.2015							
Approved: prof	Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚMV/ Course name: Control theory TSS/10							
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: 1., 3.							
Course level: II.							
Prerequisities:							
Conditions for course completion: Based on two written tests during the semester and on the oral examination.							
Learning outcomes: To learn the basic notions of controllable systems.							
Brief outline of the course: Controllable systems. Pontrjagin maximum principle. Linear systems, bang-bang controls, singular controls Discrete systems, dynamic programming, Bellmann's optimality principle. Practical applications of theoretical results.							
 Recommended literature: 1. K. Macki, A. Strauss: Introduction to Optimal Control Theory, Springer, 1980. 2. G. Feichtinger, R.F. Hartl: Optimale Kontrolle okonomischer Prozesse, Berlin, 1986. 							
Course language: Slovak							
Notes:							
Course assessment Total number of assessed students: 125							
A B C D E FX							
25.6 27.2 20.8 17.6 8.8 0.0							
Provides: prof. RNDr. Katarína Cechlárová, DrSc.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚINF/ DBS/15	NF/ Course name: Database systems for Mathematicians						
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	s: 6						
Recommended set	mester/trimes	ter of the course	e: 1., 3.				
Course level: II.							
Prerequisities:							
Conditions for co	urse completi	on:					
Learning outcome Acquired basic cor	es: ncepts and tec	hniques of relation	onal database theo	ory and correspon	nding software.		
 Brief outline of the course: Data models. Languages for defining and manipulating data (DDL, DML). Tables, attributes and integrity constraints. Queries: select, where, group by, aggregate and system functions. Nested queries and several tables: join, union, primary, foreign key. Relational algebra. Database modelling. Functional dependency and normalization. Becommended literature: 							
Recommended lit	erature:		ttion.				
Recommended lit - S. Krajčí: Databá - Date C.J., Databá - Atkinson, P., Vie John Wiley - Wroz - Itzik Ben-Gan, M - L. Davidson, J.M APRESS, 2012	erature: ázové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S	, UPJŠ, 2005 2. J l Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012	ttion. bry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa	2 /ER 2012 PROG ls, O'Reilly, 2012 lse Design and Ir	GRAMMING, 2 nplementation,		
Recommended lit - S. Krajčí: Databá - Date C.J., Databá - Atkinson, P., Vie John Wiley - Wroz - Itzik Ben-Gan, M - L. Davidson, J.M APRESS, 2012 Course language:	erature: ázové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S	, UPJŠ, 2005 2. J l Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012	ttion. bry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa	2 /ER 2012 PROG ls, O'Reilly, 2012 lse Design and Ir	GRAMMING, 2 nplementation,		
Recommended lit - S. Krajčí: Databá - Date C.J., Databá - Atkinson, P., Vie John Wiley - Wroz - Itzik Ben-Gan, M - L. Davidson, J.M APRESS, 2012 Course language: Notes:	erature: ázové systémy, áse Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S	, UPJŠ, 2005 2. J l Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012	ttion. bry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa	2 /ER 2012 PROG ls, O'Reilly, 2012 lse Design and Ir	BRAMMING, 2 nplementation,		
Recommended lit - S. Krajčí: Databá - Date C.J., Databá - Atkinson, P., Vie John Wiley - Wroz - Itzik Ben-Gan, M - L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of as	erature: ázové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL f. Moss, Pro S	ts: 674	ttion. ory, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa	2 /ER 2012 PROG ls, O'Reilly, 2012 lse Design and Ir	GRAMMING, 2 nplementation,		
Recommended lit - S. Krajčí: Databá - Date C.J., Databá - Atkinson, P., Vie John Wiley - Wroz - Itzik Ben-Gan, M - L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessmen Total number of as A	erature: ázové systémy, ase Design and arra, R., BEGIN x, 2012 ficrosoft SQL f. Moss, Pro S	ts: 674	ttion. pry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa	2 /ER 2012 PROG ls, O'Reilly, 2012 ise Design and Ir	FX		
Recommended lit- S. Krajčí: Databá- Date C.J., Databá- Atkinson, P., VieJohn Wiley - Wroz- Itzik Ben-Gan, M- L. Davidson, J.MAPRESS, 2012Course language:Notes:Course assessmenTotal number of asA12.46	erature: ázové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S t ssessed studen B 8.9	ts: 674 Cy and normaliza transformation cy and normaliza transformation cy and normaliza the comparison compar	ttion. Dry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa D 20.47	2 /ER 2012 PROG ls, O'Reilly, 2012 ise Design and Ir 	FX 10.83		
Modelling. FunctionRecommended litt- S. Krajčí: Databá- Date C.J., Databá- Atkinson, P., VieJohn Wiley - Wroz- Itzik Ben-Gan, N- L. Davidson, J.NAPRESS, 2012Course language:Notes:Course assessmenTotal number of asA12.46Provides: doc. RN	erature: azové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S t ssessed studen B 8.9 [Dr. Csaba Tör	ts: 674 C 11.87 C C C C C C C C C C C C C C C C C C C	ttion. Dry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa D 20.47	2 /ER 2012 PROG ls, O'Reilly, 2012 ise Design and Ir E 35.46	FX 10.83		
Modelling. FunctionRecommended litt- S. Krajčí: Databá- Date C.J., Databá- Atkinson, P., VieJohn Wiley - Wroz- Itzik Ben-Gan, N- L. Davidson, J.NAPRESS, 2012Course language:Notes:Course assessmenTotal number of asA12.46Provides: doc. RNDate of last modifier	erature: azové systémy, ase Design and erra, R., BEGIN x, 2012 ficrosoft SQL 1. Moss, Pro S t ssessed studen B 8.9 [Dr. Csaba Tör ication: 03.05	ts: 674 C 11.87 ck, CSc. cv and normaliza cv and normaliz	ttion. Dry, O'Reilly, 201 SOFT SQL SERV SQL Fundamenta Relational databa D 20.47	2 /ER 2012 PROG ls, O'Reilly, 2012 ise Design and Ir E 35.46	FX 10.83		

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: ÚMV/ DPP1a/14	Course name: Diploma Pr	oject I				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent					
Number of credits: 1						
Recommended seme	ster/trimester of the cours	e: 2.				
Course level: II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language: Slovak						
Notes:						
Course assessment Total number of asses	ssed students: 90					
	abs n					
98.89 1.11						
Provides: doc. RNDr. Roman Soták, PhD.						
Date of last modifica	tion: 03.05.2015					
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚMV/ DPP1b/14	Course name: Diploma	Project II		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent			
Number of credits: 1				
Recommended seme	ster/trimester of the cou	rse: 3.		
Course level: II.				
Prerequisities: ÚMV	/DPP1a/14			
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language: Slovak				
Notes:				
Course assessment Total number of asses	ssed students: 79			
	abs	n		
98.73 1.27				
Provides: prof. RND	. Katarína Cechlárová, D	·Sc.		
Date of last modifica	tion: 03.05.2015			
Approved: prof. RNI	Dr. Mirko Horňák, CSc.			

University: P. J.	. Šafárik Univers	sity in Košice			
Faculty: Faculty	y of Science				
Course ID: ÚM DPO/14	IV/ Course na	ame: Diploma the	esis and its defer	nce	
Course type, sc Course type: Recommended Per week: Per Course metho	ope and the me d course-load (h r study period: d: present	thod: ours):			
Number of crea	dits: 20				
Recommended	semester/trime	ster of the cours	e:		
Course level: II	- -				
Prerequisities:					
Conditions for	course complet	ion:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag Slovak	ge:				
Notes:					
Course assessm Total number of	ent f assessed studer	nts: 20			
А	В	C	D	E	FX
35.0	40.0	20.0	0.0	0.0	5.0
Provides:					
Date of last mo	dification: 03.03	5.2015			
Approved: prof	f. RNDr. Mirko I	Iorňák, CSc.			

University: P. J.	Šafárik Univers	ity in Košice				
Faculty: Faculty	of Science					
Course ID: ÚINF/ VEP1/15Course name: Formal methods in a verification						
Course type, sco Course type: Lo Recommended Per week: 2 / 1 Course method	pe and the met ecture / Practice course-load (h Per study periodicity of the study periodicity of the study periodicity of the study periodicity of the study of	hod: ours): od: 28 / 14				
Number of credi	its: 4					
Recommended s	emester/trimes	ster of the cours	e: 2., 4.			
Course level: II.						
Prerequisities:						
Conditions for c	ourse completi	on:				
Learning outcom	nes:					
Brief outline of t	the course:					
Recommended l	iterature:					
Course language	2:					
Notes:						
Course assessme Total number of	ent assessed studen	ts: 23				
A	В	С	D	Е	FX	
30.43	26.09	17.39	17.39	0.0	8.7	
Provides: doc. R	NDr. Gabriela A	Andrejková, CSc.	, Mgr. Alexande	r Szabari, PhD.	<u> </u>	
Date of last mod	ification: 03.05	5.2015				
Approved: prof.	RNDr. Mirko H	lorňák, CSc.				

University: P. J. Šafárik University in Košice							
Faculty: Faculty	of Science						
Course ID: ÚIN ZNA1/15	F/ Course na	Course name: Foundations of knowledge systems					
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 cred	its: 4						
Recommended s	semester/trimes	ster of the cours	e: 2.				
Course level: II.							
Prerequisities:							
Conditions for c	ourse completi	on:					
Learning outcor The goal is to tea in database and l	nes: ich students som knowledge syste	ne advanced appli ems.	ications of logic i	into computer sci	ence, especially		
Logic formulas, usability. SLD-1 deductive databa Concept Analysi decomposition, f	semantic, mod resolution and ases. Logic and s (FCA). Basic factorisation. Int	dels and logical query, SLD tre d expert systems notions of Fuzzy rercontextual stru	I inference. Her es. Logic and s. Basic notions logic and Fuzzy ictures, bonds.	brand model, co databases, relation of Lattice Theo extension of FCA	onstruction and onal databases, ory and Formal A. Optimal table		
Recommended literature: Shawn Hedman. A first course in logic: An introduction to model theory, proof theory, computability and complexity. Oxford university press, ISBN 0–19–852980–5, 2006. Shan-Hwei Nienhuys-Cheng, Ronald de Wolf. Foundations of Inductive Logic Programming. Springer-Verlag, ISBN 3-540-62927-0, 1997. Kristian Kersting. An Inductive Logic Programming Approach to Statistical Relational Learning, IOS Press, ISBN 1-58603-674-2, 2006. Nilsson U., Maluszynski J.: Logic, Programming and Prolog, John Wiley & Sons Ltd. 1995. Bělohlávek R.: Fuzzy Relational Systems: Foundations and Principles. Kluwer, Academic/ Plenum Publishers, New York, 2002.							
Course language	e:						
Notes:							
Course assessme Total number of	ent assessed studen	ts: 19					
A	В	С	D	Е	FX		
47.37	10.53	21.05	5.26	10.53	5.26		

Provides: doc. RNDr. Stanislav Krajči, PhD., RNDr. Ondrej Krídlo, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚINF/ FML/15	Course ID: ÚINF/ FML/15Course name: Fuzzy sets and fuzzy logic						
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	ŀ						
Recommended seme	ster/trimes	ter of the course	e: 2., 4.				
Course level: II.							
Prerequisities:							
Conditions for cours	e completi	on:					
Learning outcomes: To understand basic i	notions of f	uzzified approach	to the mathema	atical logic and the	e set theory.		
Brief outline of the c Motivation. Definitions of basic r Fuzzy logic as an ext Different types of fuz Fuzzy connections (t Fuzzy relations, Chu	ourse: notions. ension of cl zzy logics. -norms, t-co spaces.	assical one. onorms).					
Recommended litera 1. H. T. Nguyen, E. A 2. V. Novák: Fuzzy n	ture: A. Walker: A nnožiny a ic	A First Course in h aplikace, SNTI	Fuzzy Logic, Cl L Praha 1986, ir	hapman & Hall/C 1 Czech, 1986	RC, 2006		
Course language:							
Notes:							
Course assessment Total number of asse	Course assessment Total number of assessed students: 1						
A	В	С	D	E	FX		
100.0	0.0	0.0	0.0	0.0	0.0		
Provides: doc. RNDr	. Stanislav l	Krajči, PhD.					
Date of last modifica	tion: 03.05	.2015					
Approved: prof. RNI	Dr. Mirko H	lorňák, CSc.					

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚM THR/10	IV/ Course na	me: Game theor	ry				
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 crea	dits: 6						
Recommended	semester/trimes	ster of the cours	e: 1., 3.				
Course level: II							
Prerequisities:							
Conditions for Two written exa examination.	course completi ams dring the ser	on: nester. The final	assessment is ba	ased on the writte	n tests and oral		
Learning outco To learn the ba situations from	sic methods of g everyday life as	game theory. We simple games.	also require that	at students will be	e able to model		
Brief outline of Examples of ga theory of utility games: core, Sh The students sh duality theory a	The course: ames. Extensive Matrix games an apley value. Eco ould have basic k and simplex meth	form of a game, nd their solution. nomic application nowledge in prob od).	y value of the ga Bimatrix games ons of game theo bability theory ar	ume. Von Neumar Theory of negotia ry. nd linear programi	nn Morgenstern ations. n-person ning (including		
 Recommended literature: 1. K. Binmore, Fun and games, D.C. Heath, 1992 2. M. Chobot, F. Turnovec, V. Ulašin, Teória hier a rozhodovania, Alfa, Bratislava, 1991. 3. G. Owen, Game Theory, Academic Press (existuje ruský preklad). 4. L.C. Thomas, Games, Theory and Applications, Wiley, New York. 5. H.S. Bierman, L.Fernandez, Game Theory with Economic Applications, Addison-Wesley, 1998 							
Course languag Slovak	ge:						
Notes:							
Course assessm Total number of	nent f assessed studen	ts: 112					
А	В	С	D	Е	FX		
17.86	22.32	17.86	24.11	16.96	0.89		
Provides: prof.	RNDr. Katarína	Cechlárová, DrS	c.				

Date of last modification: 03.05.2015

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J.	Šafárik Univers	ity in Košice				
Faculty: Faculty of Science						
Course ID: ÚMV GZB/10	V/ Course na	me: Geometric t	ransformations			
Course type, sco Course type: Le Recommended Per week: 2 / 1 Course method	pe and the met ecture / Practice course-load (he Per study period : present	hod: ours): od: 28 / 14				
Number of credi	its: 5					
Recommended s	emester/trimes	ter of the course	e: 1., 3.			
Course level: II.						
Prerequisities:						
Conditions for c Exam realized by	ourse completie a test.	on:				
Learning outcon To obtain a deep	nes: er knowledge or	n projective space	es and transform	nation groups.		
Brief outline of t Projective spaces clasification of c	he course: s, Projective tra ollineations.	nsformations, co	ollineations. Fix	ted elements of a	collineation. A	
Recommended li S. V. Duzhin, B.	iterature: D. Chebotarevs	ky: Transformati	on Groups for I	Beginers, AMS 20	004	
Course language Slovak	2:					
Notes:						
Course assessme Total number of a	Course assessment Total number of assessed students: 24					
A	В	С	D	E	FX	
33.33	33.33 29.17 25.0 8.33 4.17 0.0					
Provides: doc. R	NDr. Jaroslav Iv	vančo, CSc.		·		
Date of last mod	ification: 03.05	.2015				
Approved: prof.	RNDr. Mirko H	lorňák, CSc.				

University: P. J. Šafărik University in Košice Faculty: Faculty of Science Course ID: ÚMV/ Course name: Graph theory TGF/10 Course type, scope and the method: Course type, scope and the method: Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present Number of credits: 4 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Coral exam. Conditions for course completion: Oral exam. Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendro's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings. and non-repetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jg21695. 2. J. A. Bondy, U.S. R. Murty: Graph Theory, Springer 2008. J. Czap, S. Jendrol', F. Kardos, R. Sotak: Facial parity edge colourin		
Faculty: Faculty of Science Course ID: ÚMV/ TGF/10 Course name: Graph 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: 4 Recommended semester/trimester of the course: 1. Course level: 11. Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on sclected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem). Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabriei and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jg21695. 2. J. A. Bondy, U. S. R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardos, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. 4. J. Czap, S. Jendrol', W. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. 5. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. 6. F. Havet, S. Jendrol', H. J. Voss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete	University: P. J. Šafá	rik University in Košice
Course ID: ÚMV/ Course name: Graph theory TGF/10 Course type: Lecture Recommended course-load (hours): Per weck: 2 Per study period: 28 Course method: present Number of credits: 4 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: Oral exam. Course level: II. Pasic Knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/igt21695. 2. A. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', K. Woigt: Parity vertex coloring of plane graphs, Discrete Math. 311(2011), 2735-2740. 4. J. Czap, S. Jendrol', R. Soták, F. Škrabuľáková, Facial non-repe	Faculty: Faculty of S	cience
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per weck: 2 Per study period: 28 Course method: present Number of credits: 4 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedcan solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/git21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Staki: Facial parity edge colouring of plane pseudographs, Discrete Math. 3112(2012), 2735-2740.	Course ID: ÚMV/ TGF/10	Course name: Graph theory
Number of credits: 4 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. 4. J. Czap, S. Jendrol', R. Soták, E. Škrabuľáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol', R. Soták, E. Škrabuľáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S.	Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: e rse-load (hours): dy period: 28 rsent
Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. 4. J. Czap, S. Jendrol', R. Soták, E. Skrabul'áková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol', R. Soták, E. Skrabul'áková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol, HJ. Voss: Light subgraphs of graphs embedd	Number of credits: 4	
Course level: II. Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 311(2011), 512-520. 5. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. 6. F. Havet, S. Jendrol', R. Soták, E. Skrabuľáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol, M. Voss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete Math. 313(2013), 406-421.	Recommended seme	ster/trimester of the course: 1.
Prerequisities: Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 311(2012), 2735-2740. 4. J. Czap, S. Jendrol', M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. 5. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. 6. F. Havet, S. Jendrol', R. Soták, E. Skrabuľáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol', HJ. V	Course level: II.	
 Conditions for course completion: Oral exam. Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol''s theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 311(2012), 2735-2740. J. Czap, S. Jendrol', M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. F. Havet, S. Jendrol', R. Soták, E. Skrabułáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. S. Lendrol', HJ. Voss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete Math. 313(2013), 406-421. Course language: Slovak	Prerequisities:	
 Learning outcomes: Basic knowledge concerning methods how new discoveries in matematics. Deeper knowledge on selected topics in graph theory. Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. J. Czap, S. Jendrol', M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. F. Havet, S. Jendrol', R. Soták, E. Škrabul'áková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. S. J. Course language: 	Conditions for cours Oral exam.	e completion:
 Brief outline of the course: Embeddings graphs into surfaces. Global properties of embedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and Archimedean solids. Introduction into the theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and Jendrol's theorem, light paths. Introduction into colourings of embedded graphs: The four colour theorem, rainbow colourings, parity colourings, and non-repetitive colourings. Words and colourings. Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. 4. J. Czap, S. Jendrol', M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. 5. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. 6. F. Havet, S. Jendrol', R. Soták, E. Škrabuľáková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol', HJ. Voss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete Math. 313(2013), 406-421. Course language: Slovak 	Learning outcomes: Basic knowledge com selected topics in gray	cerning methods how new discoveries in matematics. Deeper knowledge on ph theory.
 Recommended literature: 1. J. Barat, J. Czap: Facial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, DOI:10.1002/jgt21695. 2. J. A. Bondy, U.S R. Murty: Graph Theory, Springer 2008. 3. J. Czap, S. Jendrol', F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, Discrete Math. 312(2012), 2735-2740. 4. J. Czap, S. Jendrol', M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. 311(2011), 512-520. 5. G. Chartrand, L. Lesniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. 6. F. Havet, S. Jendrol', R. Soták, E. Škrabul'áková, Facial non-repetitive edge-coloring of plane graphs, J. Graph Theory 66(2011), 38-48. 7. S. Jendrol', HJ. Voss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete Math. 313(2013), 406-421. 	Brief outline of the c Embeddings graphs i Global properties of e Archimedean solids. Introduction into the Jendrol''s theorem, lig Introduction into colo parity colourings, and Words and colourings	ourse: nto surfaces. mbedded graphs: Oblique graphs (Voigt and Walther's theorem), Platonic and theory of light graphs: Kotzig's theorem, Borodin's theorem, Fabrici and ght paths. purings of embedded graphs: The four colour theorem, rainbow colourings, I non-repetitive colourings.
Course language: Slovak	Recommended litera 1. J. Barat, J. Czap: F DOI:10.1002/jgt2169 2. J. A. Bondy, U.S R 3. J. Czap, S. Jendrol Discrete Math. 312(2 4. J. Czap, S. Jendrol 311(2011), 512-520. 5. G. Chartrand, L. L 6. F. Havet, S. Jendrol graphs, J. Graph Theo 7. S. Jendrol', HJ. W Math. 313(2013), 400	 ture: acial nonrepetitive verxex coloring of plane graphs, J. Graph Theory, 5. Murty: Graph Theory, Springer 2008. F. Kardoš, R. Soták: Facial parity edge colouring of plane pseudographs, 012), 2735-2740. M. Voigt: Parity vertex colouring of plane graphs, Discrete Math. esniak, P. Zhang: Graphs and digraphs, CRC Press, Boca Raton 2011. I', R. Soták, E. Škrabuľáková, Facial non-repetitive edge-coloring of plane ory 66(2011), 38-48. oss: Light subgraphs of graphs embedded in the plane - A Survey, Discrete 5-421.
	Course language: Slovak	

Notes:							
Course assessment Total number of assessed students: 48							
А	В	С	D	Е	FX		
50.0	16.67	12.5	12.5	8.33	0.0		
Provides: prof.	RNDr. Stanislav	Jendrol', DrSc.					
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J.	Šafárik Univers	sity in Košice					
Faculty: Faculty of Science							
Course ID: ÚM TGP/10	V/ Course na	ame: Group theor	у				
Course type, sco Course type: L Recommended Per week: 2 / 1 Course method	ope and the me ecture / Practice course-load (h Per study peri l: present	thod: e ours): od: 28 / 14					
Number of cred	its: 5						
Recommended s	semester/trime	ster of the course	e: 2., 4.				
Course level: II.							
Prerequisities:							
Conditions for a Awarded accord	course complet ing to written an	on: nd oral examination	on.				
Learning outcome The students lear parts of mathem	mes: arn basic concep atics.	ots and methods c	of group theory	and their applicat	tions in various		
Brief outline of Groups of symmetry subgroups, factor groups. Groups	the course: netries, abstract orization. Classi in linear algebra	t groups. Subgrou fication of finitely	ups, orders of generated abe	elements, cyclic g lian groups. Sylov	groups. Normal v subgroups, p-		
Recommended I S. MacLane, G. L. Beran: Grupy D.A.R. Wallace: J. J. Rotman: Ac	literature: Birkhoff: Algeb a svazy, SNTL Groups, Rings lvanced Modern	ra, Alfa Bratislav Praha, 1974 and Fields, Sprin Algebra, Amer.	ra, 1973 ger 1998 Math. Soc., Pro	vidence 2010			
Course languag Slovak or Englis	e: sh						
Notes:							
Course assessme Total number of	ent assessed studen	ıts: 35					
A B C D E FX							
42.86 25.71 17.14 5.71 8.57 0.0							
Provides: doc. R	Provides: doc. RNDr. Miroslav Ploščica, CSc.						
Date of last mod	lification: 03.05	5.2015					
Approved: prof.	RNDr. Mirko H	Iorňák, CSc.					

University: P. J. Šafárik University in Košice					
Faculty: Faculty	y of Science				
Course ID: KFa DF2p/03	aDF/ Course na	ame: History of I	Philosophy 2 (Ge	neral Introductio	n)
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 crea	lits: 4				
Recommended	semester/trimes	ster of the cours	e:		
Course level: I.	, II.				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number of	ent f assessed studen	ts: 731			
А	В	С	D	Е	FX
60.6 13.82 12.72 8.76 3.42 0.68					
Provides: doc. PhDr. Pavol Tholt, PhD., mim. prof., Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., Mgr. Róbert Stojka, PhD.					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Mirko Horňák, CSc.					

University: P. J. Šafárik University in Košice						
Faculty: Faculty	y of Science					
Course ID: KFa KDF/05	aDF/ Course n Centuries	ame: Chapters fr (General Introdu	om History of Ph ction)	ilosophy of 19th	and 20th	
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 crea	dits: 2					
Recommended	semester/trime	ster of the cours	e: 2.			
Course level: II						
Prerequisities:						
Conditions for	course complet	ion:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:				_		
Course assessm Total number of	nent f assessed studer	nts: 10				
А	В	С	D	Е	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: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafárik University in Košice						
Faculty: Faculty	of Science					
Course ID: KFa IH2/03	DF/ Course na	ame: Idea Humar	nitas 2 (General I	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 cred	lits: 2					
Recommended s	semester/trimes	ster of the cours	e: 3.			
Course level: II.						
Prerequisities:						
Conditions for a	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	e:					
Notes:	,					
Course assessme Total number of	Course assessment Total number of assessed students: 8					
A	В	С	D	Е	FX	
87.5 12.5 0.0 0.0 0.0 0.0						
Provides: Doc. PhDr. Peter Nezník, CSc.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafárik University in Košice								
Faculty: Faculty of	fScience							
Course ID: ÚMV/ MSI/14	Course na	ame: Informatica	l Mathematics					
Course type, scope Course type: Recommended co Per week: Per st Course method: p	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 sen	nester/trimes	ster of the cours	e:					
Course level: II.								
Prerequisities:								
Conditions for cou Acquiring the requ	irse completi ired number o	on: of credits in the s	tructure defined	by the study plan				
Learning outcome Evaluation of stude	s: ent's compete	ences with respec	t to the profile of	f the graduate.				
The state exam is of (equivalently ÚINH 1. Arithmetical cod 2. The use of discre 3. Test for identify 4. Using Bernoulli 5. The notion of a r 6. Important NP-co 7. Eulerian graphs, 8. Travelling Sales	brganised as a F/KPI), ÚMV ling. et Fourier tran ing codes. distribution t nondeterminis omplete probl Chinese Post man Problem	discourse focusi /TKO, ÚINF/VY nsform in coding o classify codes. stic algorithm wo ems. tman Problem. – results on com	ng on one subjec Z1 and ÚMV/K orking in polynor plexity, approxin	et from the course OA. nial time, NP-cor mation algorithms	s ÚINF/KMU1 npleteness. 5.			
Recommended lite	erature:							
Course language: Slovak								
Notes:								
Course assessment Total number of as	t sessed studen	ıts: 6						
A	В	С	D	E	FX			
16.67 16.67 33.33 16.67 16.67 0.0								
Provides:								
Date of last modification: 26.04.2016								
Approved: prof. RNDr. Mirko Horňák, CSc.								

University: P. J. S	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚINF AIS1/15	Course na	me: Information	systems archite	ecture	
Course type, sco Course type: Le Recommended Per week: 2 / 1 Course method	pe and the met ecture / Practice course-load (h Per study perio : present	hod: ours): od: 28 / 14			
Number of credi	ts: 4				
Recommended se	emester/trimes	ter of the cours	e: 2.		
Course level: II.					
Prerequisities:					
Conditions for co Work on project. Written and oral of	ourse completi	on:			
Learning outcom To provide an ov introduce the fun-	nes: verview of the damental princi	modern method ples of conceptu	ologies of infor al modelling of	mation system de	evelopment. To ms.
System, informat model of the arch life cycle based marking models. Taxonomies. Dor	ion system, info nitecture of an i on MDA. Moo Entity types. I nain events. Us	ormation pyramic nformation syste lel, metamodel, Relationship type e cases. State tra	d. Conceptualisa em. Introduction modelling lang es. Cardinality nsition diagrams	ation of information to MDA, softwa uage. Model tran constraints. Integr s.	on systems. ISO re development sformation and rity constraints.
Recommended li 1. http://www.om 2. Ian Sommervil 3. Anneke Klepp Addison-Wesley 4. Scott Berkun, 7	terature: ig.org le, Software Er e, Wim Bast, Jo 2003 The Art Of Proj	ngineering, Addis os B Warmer, MI ject Management	son-Wesley 200: DA Explained, th t, O Reilly 2005	5 ne Model Driven A	Architecture,
Course language	•				
Notes:					
Course assessme Total number of a	nt assessed studen	ts: 167			
Α	В	С	D	E	FX
19.76	31.14	25.15	8.98	11.38	3.59
Provides: doc. RI	NDr. Gabriel Se	emanišin, PhD.			
Date of last mod	ification: 01.06	.2015			

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J.	Šafárik Univ	ersity in Košice					
Faculty: Faculty of Science							
Course ID: ÚM TIN/10	V/ Course	name: Informatio	n theory				
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the n Lecture I course-load er study perio d: present	nethod: (hours): od: 28					
Number of cred	lits: 4						
Recommended	semester/trir	nester of the cours	se: 1., 3.				
Course level: II							
Prerequisities:							
Conditions for A student is eva chosen by him/l at maximum). H 50-59 p., FX	course compl luated accordiner at random Evaluation sca 0-49 p.	etion: ng to an oral exami one from the grou le: A 90-100 p.,	nation during wh p A and one fron B 80-89 p., C	ich he/she answe n the group B (bo 2 70-79 p., D .	rs two questions oth for 50 points 60-69 p., E		
Learning outco A student gets a	mes: cquainted with	a mathematical at	tempt to solve son	ne problems of co	omputer science.		
Brief outline of A quantitative c Inequalities invo Data compression	the course: haracteristic o olving mutual on.	f an information. I information and en	Entropy of a rando ntropy, respective	om variable. Mut ly. Typical seque	ual information. ence, typical set.		
Recommended T. M. Cover, J. T. K. Moon, Inf http://digitalcom	literature: A. Thomas, E formation The nmons.usu.ed	lements of Informatory (free online con a/ocw_ece/3/	tion Theory, Wildurse materials), av	ey, 1991 (2nd ed. vailable at the ad-	. 2006) dress		
Course languag Slovak	ge:						
Notes:							
Course assessm Total number of	Course assessment Total number of assessed students: 84						
A B C D E FX							
38.1 19.05 19.05 13.1 5.95 4.76							
Provides: prof. RNDr. Mirko Horňák, CSc.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J. Ša	fárik Univers	sity in Košice					
Faculty: Faculty of	Science						
Course ID: ÚMV/ TZV/10	Course n	ame: Lattice theor	ry				
Course type, scope Course type: Lect Recommended co Per week: 2 / 1 Pe Course method: p	and the me aure / Practice ourse-load (her study peri present	thod: e ours): od: 28 / 14					
Number of credits	: 5						
Recommended sen	nester/trime	ster of the course	: 2., 4.				
Course level: II.							
Prerequisities:							
Conditions for cour Awarded according	rse complet to written a	ion: nd oral examination	on.				
Learning outcome The students learn in various parts of t	s: basic concep mathematics.	ts and methods of	lattice theory a	and gain the abilit	y to apply them		
Brief outline of the Ordered sets and la Completeness and	e course: attices. Distri completions.	butivity and mode Formal concept a	ularity. Ideals a nalysis.	nd set-theoretical	representation.		
Recommended lite G. Grätzer: Genera B. A. Davey, H. A. M. Kolibiar: Algeb	rature: l Lattice The Priestley: In ra a príbuzné	ory (2nd edition), troduction to lattic disciplíny, Alfa F	Birkhäuser, 19 ces and order, C Bratislava, 1991	98 Cambridge Univer	sity Press 1990		
Course language: Slovak							
Notes:							
Course assessment Total number of as	sessed studer	nts: 25					
A	A B C D E FX						
32.0 12.0 36.0 16.0 4.0 0.0							
Provides: doc. RNDr. Miroslav Ploščica, CSc.							
Date of last modifi	cation: 03.03	5.2015					
Approved: prof. R	NDr. Mirko I	Horňák, CSc.					

University: P. J. Ša	fárik Univers	ity in Košice				
Faculty: Faculty of	Faculty: Faculty of Science					
Course ID: ÚINF/ LAD1/15	Course na	me: Logical asp	ects of databases	3		
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present						
Number of credits:	4					
Recommended sem	ester/trimes	ster of the cours	e: 2.			
Course level: II.						
Prerequisities:						
Conditions for cou	rse completi	on:				
Learning outcomes To understand and logic programming	to be able to	formalize relati	onships between	i databases, first	order logic and	
Brief outline of the Relationships betwe	course: een databases	s, logic and logic	programming.			
Recommended lite Serge Abiteboul, R ISBN 0-201-53771	r ature: ichard Hull, ' -0	Victor Vianu: Fou	undations of Data	abases. Addison-	Wesley 1995,	
Course language:						
Notes:						
Course assessment Total number of assessed students: 64						
Α	A B C D E FX					
34.38 17.19 21.88 14.06 10.94 1.56						
Provides: doc. RNDr. Stanislav Krajči, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J	University: P. J. Šafárik University in Košice						
Faculty: Facult	y of Science						
Course ID: ÚIN MLG/15	VF/ Course na	ame: Mathematio	cal logic				
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 crea	lits: 4						
Recommended	semester/trime	ster of the cours	e: 1., 3.				
Course level: II	•						
Prerequisities:							
Conditions for	course completi	ion:					
Learning outcomes: To understand basic notions of predicate logic (logic language, term, formula, axioms, proof, provability, truth, model, syntax and semantics, soundness, completeness), its axiomatic construction, and its influence to the set theory and the database theory.							
Brief outline of Predicate logic Axioms, proof, Interpretation, t Soundness of th Boolean algebra Syntactic mode Inductive struct Applications of	the course: - logic language provability. ruth, model. le predicate logic as. l, completeness of ures in general. `logic in set thoe `logic in databas	e, syntax and sem c. of predicate logic ry. e systems.	antics, term, forn	nula.			
 Recommended literature: 1. M. Goldstern, H. Judah: The Incompleteness Phenomenon, A New Course in Mathematical Logic, A K Peters, Wellesley, Massachusetts, 1995 2. S. Abiteboul, R. Hull, V. Vianu: Foundations of databases, Addison-Wesley Publishing Co, 1995 3. http://cs.ics.upis.sk/~kraici/skola/vyucba/ucebneTexty/logika/logika.pdf (2008, in Slovak) 							
Course languag	ge:						
Notes:							
Course assessm Total number of	Course assessment Total number of assessed students: 1						
А	В	С	D	Е	FX		
100.0	0.0	0.0	0.0	0.0	0.0		

Provides: doc. RNDr. Stanislav Krajči, PhD., RNDr. Ondrej Krídlo, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Mirko Horňák, CSc.

Faculty: Faculty of Science								
Course ID: ÚMV/ Course name: Matroid theory TMT/10								
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: 1., 3.								
Course level: II.								
Prerequisities:								
A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (65 points at maximum) and one from the group B (35 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p.								
Learning outcomes: A student gets acquainted with basic notions of matroid theory and possibilities of using matroids in various disciplines of discrete mathematics.								
Brief outline of the course: Independent sets and bases. Properties of rank function. Closure operator. Circuits. Duality in matroids. Hyperplanes.								
Recommended literature: D. J. A. Welsh: Matroid Theory, Academic Press, 1976 J. Oxley, Matroid Theory, Oxford University Press, 2010								
Course language: Slovak								
Notes:								
Course assessment Total number of assessed students: 28								
A B C D E FX								
25.0 17.86 17.86 10.71 21.43 7.14								
Provides: prof. RNDr. Mirko Horňák, CSc.								
Date of last modification: 03.05.2015								
Date of last modification: 03.05.2015								

University: P. J. Šafárik University in Košice								
Faculty: Faculty of Science								
Course ID: ÚBEV/ Course name: Molecular Biology MOB2/10								
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 credi	ts: 3							
Recommended se	emester/trimes	ter of the course	e: 2.					
Course level: I.,]	[I							
Prerequisities:								
Conditions for co	ourse completi	o n:						
Learning outcom Familiarize stude and their work, for gene expression a	nes: ents with the str ocusing primaril and cell cycle.	ructure, propertie ly on the molecul	es and function ar mechanisms	ns of information r s of regulation of D	nacromolecules NA replication,			
Structure and pro- mitotic and meio extrachromosoma The human genor and editing. Tran- protein interaction the cell cycle.	operties of info tic chromosome al DNA. Repair me. Mobile gen solation and pos ns. Regulation	rmation macrom es. Dynamics of r of DNA damag etic elements. Tra- ttranslational mo of the expression	olecules. Mole chromosomes. ge. Genome of anscription and difications. Sp of prokaryotic	ecular structure of Replication of ch prokaryotic and e l posttranscriptiona pecific protein degree and eukaryotic ge	E chromatin and romosomal and eukaryotic cells. al modifications radation. DNA- enes. Control of			
Recommended literature: E. Mišúrová:Molekulárna biológia. Učebné texty, PF UPJŠ Košice, 1999 E. Mišúrová, P. Solár: Molekulová biológia. Učebné texty, PF UPJŠ, 2007 S.Rosypal:Úvod do molekulární biologie. Grafex Blansko, Brno,1999 Alberts, D.Bray, J. Lewis a kol.: Molecular Biology of the Cell, Academic Press, London, 1994 D.P. Clark: Molecular Biology, Elsevier Academic Press, London, 2005								
Course language:								
Notes:								
Course assessment Total number of assessed students: 0								
A	В	С	D	E	FX			
0.0	0.0	0.0	0.0	0.0	0.0			
Provides: doc. R	NDr. Peter Solá	r, PhD.		•	·			
Date of last mod	ification: 03.05	.2015		-				

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚTVŠ/ NJ//13	Course ID: ÚTVŠ/ Course name: Naval Yachting NJ//13						
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	2						
Recommended seme	ster/trimester of the cours	e:					
Course level: I., II.							
Prerequisities:							
Conditions for cours	e completion:						
Learning outcomes:							
Brief outline of the c	ourse:						
Recommended litera	iture:						
Course language:							
Notes:							
Course assessment Total number of assessed students: 2							
abs n							
100.0 0.0							
Provides: doc. Mgr. Rastislav Feč, PhD.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Mirko Horňák, CSc.							

University: P. J	University: P. J. Šafárik University in Košice						
Faculty: Facult	y of Science						
Course ID: Dek. PF UPJŠ/PPZ/13Course name: Personality Development and Key Competences for Success on a Labour Market							
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 14s Course method: present							
Number of cree	dits: 2						
Recommended	semester/trime	ster of the cours	e: 1., 3.				
Course level: II	[
Prerequisities:							
Conditions for	course complet	ion:					
Learning outco	omes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Notes:							
Course assessment Total number of assessed students: 39							
A B C D E FX							
100.0 0.0 0.0 0.0 0.0 0.0							
Provides: RNDr. Peter Stefányi, PhD.							
Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Mirko l	Horňák, CSc.					

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚMV/ POT/10	Course name: Polyhedral theory					
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 28 esent					
Number of credits: 4	L					
Recommended seme	ster/trimester of the course: 2.					
Course level: II.						
Prerequisities:						
Conditions for cours Oral exam.	se completion:					
Learning outcomes: Mastered basic know	ledge from theory of convex polyhedra and polyhedral maps.					
Brief outline of the c Classification of surf Combinatorial and ge Graphs of polyhedra. Polyhedral maps. Eu Steinitz' theorem. Light subgraphs. Face- and vertex- vec Groups of symmetrie Applications in optim	ourse: aces. cometric properties of three-dimensional convex polyhedra. ler's theorem, ctors. Eberhard's theorem. es of polyhedra. nization and chemistry.					
Recommended litera 1. B. Grunbaum: Cor 2. S. Jendrol': Light s 313(2013), 406-421. 3. E. Jucovič: Konver 4. G. Ringel, Map co 2. G.M. Ziegler: Lect	nture: nvex polytopes (2nd edition), Springer New York, 2003. subgraphs of graphs embedded in the plane - a survey, Discrete Math. xné mnohosteny, Veda Bratislava 1981. lor theorem, Springer-Verlag 1974. tures on Polytopes, Springer-Verlag, New York, 1996					
Course language: Slovak						

Notes:

Course assessment Total number of assessed students: 12							
A B C D E FX							
83.33	83.33 0.0 0.0 16.67 0.0 0.0						
Provides: prof. RNDr. Stanislav Jendrol', DrSc.							
Date of last modification: 03.05.2015							
Approved: prof	Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J.	. Šafárik Univers	ity in Košice					
Faculty: Faculty	y of Science						
Course ID: KPPaPZ/PPZM	Course ID: KPPaPZ/PPZMg/12 Course name: Psychology and Health Psychology (Master's Study)						
Course type, sc Course type: I Recommended Per week: 1/2 Course metho	ope and the met Lecture / Practice d course-load (h 2 Per study perio d: present	hod: ours): od: 14 / 28					
Number of crea	lits: 4						
Recommended	semester/trimes	ter of the cours	e:				
Course level: II	•						
Prerequisities:							
Conditions for	course completi	on:					
Learning outco	mes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Notes:							
Course assessm Total number of	ent f assessed studen	ts: 223					
А	В	С	D	Е	FX		
19.73	19.73 25.56 25.56 12.56 16.14 0.45						
Provides: PhDr. PhD.	. Anna Janovská,	PhD., PhDr. Ka	rolína Barinková	, PhD., Mgr. Luc	ia Hricová,		
Date of last modification: 03.05.2015							
Approved: prof	RNDr. Mirko H	lorňák, CSc.					

University: P. J. Šafárik University in Košice								
Faculty: Faculty of Science								
Course ID: ÚGE/ EUG1/10	Course ID: ÚGE/ Course name: Regional geography of Europe EUG1/10							
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 credit	s: 3							
Recommended se	mester/trimes	ter of the cours	e: 2.					
Course level: I., I	[
Prerequisities:								
Conditions for co test plus oral exam	urse completi nination	on:						
Learning outcom	es:							
Brief outline of the course: Pre-history of Europe, development of population, creation of the first state organisations. Development of political map of Europe from the Middle Ages and to present. National, linguistic and religious development of European population and its present distribution. Economy of different regions of Europe – Northern Europe, Southern Europe, Western Europe, postcommunist countries of Central Europe, and Russia.								
 BLOUET, B. W. 2008: The EU & Neighbours. A Geography of Europe in the Modern World. Wiley & Sons. De BLIJ, H.J., MULLER, P. O. 2008: The World Today. Concepts and Regions in Geography. 3rd edition. Wiley. ISBN 0-470-04681-3 GAJDOŠ, A., MAZÚREK, J. 2004: Geografia štátov Európskej únie. 1. časť, Banská Bystrica: Fakulta prírodných vied, 186 s. ISBN 80-8055-997-X GAJDOŠ, A., MAZÚREK, J. 2006: Geografia štátov Európskej únie a ostatných štátov Európy. 2. časť, Banská Bystrica: Fakulta prírodných vied, 159 s. ISBN 80-8083-284-6 SKOKAN, L. 2005: Rusko. Geografický přehled. Ústí nad Labem, 215 s ISBN 80-7044-647-1 VITURKA, M., ŘEHÁK, S., VANČURA, M. 2004: Regionální geografie Evropy a ČR, Brno: Masarykova univerzita v Brne, 126 s. ISBN 80-210-3504-8 								
Course language:								
Notes:								
Course assessmer Total number of a	nt ssessed studen	ts: 153						
Α	В	С	D	E	FX			
21.57	18.3	22.88	16.99	19.61	0.65			

Provides: RNDr. Stela Csachová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	Course ID: ÚTVŠ/ Course name: Seaside Aerobic Exercise ÚTVŠ/CM/13					
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 seme	ster/trimester of the cours	e:				
Course level: I., II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of assessed students: 7						
abs n						
57.14 42.86						
Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNI	Dr. Mirko Horňák, CSc.					

University: P. J. Šafárik University in Košice								
Faculty: Faculty of Science								
Course ID: ÚIN SDM1a/15	Course ID: ÚINF/ Course name: Seminár on data mining SDM1a/15 Course name: Seminár on data mining							
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 cree	dits: 2							
Recommended	semester/trime	ster of the course	e: 2.					
Course level: II	•							
Prerequisities:								
Conditions for	course complet	ion:						
Learning outco Deepened know	mes: vledge and gaine	d overview of the	state-of-the-art	in the area of dat	ta mining.			
Brief outline of The seminar is	the course: devoted to study	and discussion al	oout recent adva	ances in the field	of data mining.			
Recommended Jiawei Han, Mi Kaufmann, ISB Pang-Ning Tan, ISBN 978-0321 Ethem Alpazdin 2004.	Recommended literature: Jiawei Han, Micheline Kamber, Jian Pei. Data Mining: Concepts and Techniques. Morgan Kaufmann, ISBN 978-0123814791, 2011. Pang-Ning Tan, Michael Steinbach, Vipin Kumar. Introduction to Data Mining. Addison-Wesley, ISBN 978-0321321367, 2005. Ethem Alpazdin. Introduction to Machine Learning, The MIT Press, ISBN 978-0-262-01211-9, 2004							
Course languag	ge:							
Notes:								
Course assessment Total number of assessed students: 23								
A	A B C D E FX							
47.83	47.83 8.7 21.74 13.04 8.7 0.0							
Provides: RND	r. Tomáš Horvát	h, PhD.		•				
Date of last mo	Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Mirko I	Horňák, CSc.						

	COURSE INFORMATION LETTER
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚMV/ SHM/10	Course name: Seminar on history of mathematics
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent
Number of credits: 2	
Recommended seme	ster/trimester of the course: 1., 3.
Course level: I., II.	
Prerequisities:	
Homework, presentat More than 91 points - 81-90 points - evalua 71-80 points - rating 61-70 points - evalua 51-60 points - evalua Less than 50 points -	ion on the chosen topic during the seminar. - evaluation of A. tion of B. C. tion of D. tion of E. FX evaluation.
Learning outcomes: Students get an overv selected terms and ab	riew of the history of the development of certain mathematical disciplines and out parallel between phylogenesis and ontogenesis of mathematical thinking.
Brief outline of the c Mathematics in Early (Arabia, China, India Beginning of Moderr	ourse: y Civilizations. Greek Mathematics. Mathematics in the Near and Far East a). Medieval European Mathematics. The Renaissance of Mathematics. The n Mathematics.
Recommended litera Burton, D. M.: The H Devlin, K.: Jazyk ma Kolman, A.: Dejiny r Juškevič, A. P.: Dejin Znám,Š. a kol.: Pohľa Konforovič, A.G.: Vy	iture: listory of Mathematics: An Introduction. McGraw–Hill, 2007. tematiky. Dokořán, 2002 (in czech) natematiky ve starověku. Academia, Praha, 1968 (in slovak) ny matematiky ve středověku. Academia, Praha 1977 (in slovak) ad do dejín matematiky. Alfa, Bratislava, 1986 (in slovak) ýznamné matematické úlohy, SPN Praha, 1989 (in slovak)
course language.	

Slovak

Notes:

Course assessment Total number of assessed students: 115							
A B C D E FX							
79.13	79.13 6.09 8.7 2.61 3.48 0.0						
Provides: RNDr. Ingrid Semanišinová, PhD.							
Date of last modification: 03.05.2015							
Approved: prof	Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafán	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚINF/ DSN1a/15	Course ID: ÚINF/ Course name: Seminar on neural networks and stringology DSN1a/15					
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 seme	ster/trimester of the course	e: 2.				
Course level: II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes: To study new knowle follow current state in	edges in the area of neural n the area using conference p	etworks and stringology in the seminar form. To proceedings and special journals.				
Seminar is oriented to neural networks and s	ourse: an individual work with stu stringology.	idents which have the diploma theses in the area:				
Recommended literature: Special and research literature connected to Diplomaa theses according to recommendations of supervisor. Katuščák, D.: Ako písať vysokoškolské a kvalifikačné práce, 2. vydanie Bratislava, 1998 ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure. ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents						
Course language:						
Notes:						
Course assessment Total number of asses	ssed students: 3					
abs n						
100.0 0.0						
Provides: doc. RNDr. Gabriela Andrejková, CSc.						
Date of last modification: 03.05.2015						
Approved: prof. RNI	Dr. Mirko Horňák, CSc.					

University: P. J. Šafá	rik Univers	ity in Košice			
Faculty: Faculty of S	cience				
Course ID: KPPaPZ/SPVKE/07	Course na Situations	ame: Social-Psychological Trainin	g of Coping with Critical Life		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended seme	ster/trimes	ster of the course: 2.			
Course level: II.					
Prerequisities:					
Conditions for cours	e completi	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Notes:					
Course assessment Total number of assessed students: 111					
abs		n	Z		
97.3	97.3 2.7 0.0				
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last modification: 03.05.2015					
Approved: prof. RNI	Dr. Mirko H	Iorňák, CSc.			

University: P. J. Šafá	rik Univers	ity in Košice				
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ TVa/11	Course na	me: Sports Activities I.				
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	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	2					
Recommended seme	ster/trimes	ster of the course: 1.				
Course level: I., I.II.,	II.					
Prerequisities:						
Conditions for cours	e completi	on:				
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of asses	ssed studen	ts: 7947				
abs		n	neabs			
87.96 8.12 3.93						
Provides: PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc., doc. Mgr. Rastislav Feč, PhD., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško						
Date of last modifica	tion: 03.05	5.2015				
Approved: prof. RNI	Dr. Mirko H	Iorňák, CSc.				

University: P. J. Šafá	rik Univers	ity in Košice			
Faculty: Faculty of S	cience				
Course ID: ÚTVŠ/ TVb/11	Course na	ame: Sports Activities II.			
Course type, scope a Course type: Practio Recommended cou Per week: 2 Per stu Course method: pre	and the met ce rse-load (h dy period: esent	thod: ours): 28			
Recommended seme	ster/trimes	ster of the course: 2.			
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	se completi	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ature:				
Course language:					
Notes:	-				
Course assessment Total number of asse	ssed studen	ts: 7437			
abs		n	neabs		
85.03	85.03 10.93 4.03				
Provides: PaedDr. Im Ivan Matúš, PhD., Mg PhD., PaedDr. Milena RNDr. Stanislav Voká PhD., Mgr. Dana Dra	nrich Staško gr. Zuzana l a Švedová, ž ál, DrSc., M čková, PhD	o, doc. Mgr. Rastislav Feč, PhD., č Küchelová, doc. PaedDr. Ivan Uhe PhD., Mgr. Agata Horbacz, PhD., Igr. Lucia Kršňáková, PhD., Mgr.	loc. PhDr. Ivan Šulc, CSc., Mgr. er, PhD., Mgr. Peter Bakalár, Mgr. Marek Valanský, prof. Dávid Kaško, Mgr. Aurel Zelko,		
Date of last modifica	tion: 03.05	5.2015			
Approved: prof. RNDr. Mirko Horňák, CSc.					

University P I Šafá	rik Univers	ity in Košice				
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ TVc/11	Course na	ame: Sports Activities III.				
Course type, scope a	nd the me	thod:				
Course type: Practic	ce					
Recommended cour	rse-load (h	ours):				
Per week: 2 Per stu	dy period:	28				
Course method: pre						
Number of credits: 2						
Recommended seme	ster/trimes	ster of the course: 3.				
Course level: I., I.II.,	II.					
Prerequisities:						
Conditions for cours	e completi	on:				
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment						
Total number of asse	ssed studen	ts: 4650				
abs		n	neabs			
89.63	89.63 4.71 5.66					
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc.,						
Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena						
Švedová, PhD., Mgr. Peter Bakalár, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof.						
RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško						
Date of last modifica	tion: 03.05	5.2015				
Approved: prof. RNI	Dr. Mirko H	Iorňák, CSc.				

University: P. J. Šafá	rik Univers	ity in Košice				
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ TVd/11	Course na	ame: Sports Activities IV.				
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	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	2					
Recommended seme	ster/trimes	ster of the course: 4.				
Course level: I., I.II.,	II.					
Prerequisities:						
Conditions for cours	se completi	on:				
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of asse	ssed studen	ts: 3884				
abs		n	neabs			
85.79 6.77 7.44						
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD.						
Date of last modifica	tion: 03.05	5.2015				
Approved: prof RNDr Mirko Horňák CSc						

Approved: prof. RNDr. Mirko Horňák, CSc.

University: P. J.	. Šafárik Univers	sity in Košice					
Faculty: Facult	y of Science						
Course ID: ÚF SEV/10	V/ Course na	ame: Structure ar	d Evolution of t	he Universe			
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	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 crea	lits: 3						
Recommended	semester/trime	ster of the cours	e: 2.				
Course level: I.	, II.						
Prerequisities:							
Conditions for Test; seminar pa Oral exam with	course complet aper. preparation; 3 q	ion: uestions within th	ne curriculum pre	esented during th	e course.		
Learning outco Become acquair	mes: nted with basic k	nowledge about	the structure and	evolution of the	universe.		
Brief outline of The stars, their universe. Cosm	the course: basic properties, ological theories	structure and evo , formation, evolution	olution. Structure	and distribution of the universe.	of matter in the		
Recommended 1. Carroll, B. W Publishing Com 2. Contopoulos, 1984 3. Narlikar, J.V.	 Recommended literature: 1. Carroll, B. W., Ostlie, D. A., An Introduction to Modern Astrophysics, Addison-Wesley Publishing Company, Reading, Massachusetts, 1996. 2. Contopoulos, D. Kotsakis, Cosmology, the structure and evolution of the Universe, Springer, 1984 2. Narliker, J.V., An Introduction to Cosmology Combridge University Press, Combridge, 2002 						
Course languag Slovak, English	ge:						
Notes:							
Course assessment Total number of assessed students: 104							
А	В	C	D	Е	FX		
24.04	33.65	15.38	15.38	11.54	0.0		
Provides: doc. 1	RNDr. Rudolf G	ális, PhD.					
Date of last mo	dification: 03.03	5.2015					
Approved: prof	. RNDr. Mirko I	Horňák, CSc.					

University: P. J	. Šafárik Univer	sity in Košice						
Faculty: Facult	y of Science							
Course ID: ÚM SVK/10	IV/ Course n	ame: Students sc	ientific conferen	ice				
Course type, so Course type: Recommende Per week: Per Course metho	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of cree	dits: 4							
Recommended	semester/trime	ester of the cours	e:					
Course level: I.	, II.							
Prerequisities:								
Conditions for	course complet	ion:						
Learning outco Individual scien public presenta	omes: ntific work of stution.	idents. Publishing	of obtained res	ults in a written	form and as a			
Brief outline of	the course:							
Recommended With respect to	literature: the research pro	blematics (article	in journals, boo	vks).				
Course languag Slovak or Engli	ge: ish							
Notes:								
Course assessment Total number of assessed students: 57								
А	В	С	D	E	FX			
98.25	1.75	0.0	0.0	0.0	0.0			
Provides:								
Date of last mo	Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Mirko	Horňák, CSc.			Approved: prof. RNDr. Mirko Horňák, CSc.			

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚTVŠ/ LKSp//13	ourse ID: ÚTVŠ/ Course name: Summer Course-Rafting of TISA River KSp//13				
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	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 seme	ster/trimester of the cours	e:			
Course level: I., II.					
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Notes:					
Course assessment Total number of assessed students: 92					
abs n					
35.87 64.13					
Provides: Mgr. Peter Bakalár, PhD.					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Mirko Horňák, CSc.					

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ KP/12	Course name: Survival Co	ourse				
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	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 seme	ster/trimester of the cours	e:				
Course level: I., II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of assessed students: 251						
abs n						
43.82 56.18						
Provides: Mgr. Marek Valanský, MUDr. Peter Dombrovský						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science			-				
Course ID: KPPaPZ/UPR/0	Course name: The Art of Aiding by Verbal Exchange							
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 crea	dits: 2							
Recommended	semester/trimes	ster of the cours	e: 4.					
Course level: II	- -							
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	omes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Notes:								
Course assessm Total number of	Course assessment Total number of assessed students: 49							
А	В	С	D	Е	FX			
85.71	85.71 4.08 2.04 2.04 4.08							
Provides: Mgr. Ondrej Kalina, PhD.								
Date of last mo	dification: 03.05	5.2015						
Approved: prof	f. RNDr. Mirko H	Iorňák, CSc.			Approved: prof. RNDr. Mirko Horňák, CSc.			

University: P. J.	. Šafárik Univers	sity in Košice					
Faculty: Faculty	y of Science						
Course ID: ÚM TKO/10	V/ Course n	ame: Theory of c	odes				
Course type, sc Course type: I Recommended Per week: 4 Pe Course metho	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present						
Number of crea	lits: 6						
Recommended	semester/trime	ster of the cours	e: 1., 3.				
Course level: II	•						
Prerequisities:							
Conditions for A student is eva chosen by him/l at maximum). H 50-59 p., FX	course complet luated according her at random, o Evaluation scale: 0-49 p.	ion: to an oral examin ne from the group A 90-100 p.,	nation during wh p A and one fron B 80-89 p., C	ich he/she answe n the group B (bo 2 70-79 p., D .	rs two questions oth for 50 points 60-69 p., E		
Learning outco A student gets a of their applicat	mes: cquainted with b ion.	asic principles ar	d theoretical bas	es of text coding	and possibilities		
Brief outline of Monoids. Basic codes. Submon words. Test for sets in monoids	Brief outline of the course: Monoids. Basic notions of theory of codes. Examples of codes. Important classes of codes. Maximal codes. Submonoids generated by codes. Stable submonoids. Group codes. Free hull of a set of words. Test for recognising codes. Measure of a code. Bernoulli distribution. Dyck code. Complete sets in monoids. Thin codes. Composition of codes. Indecomposable codes						
Recommended J. Berstel and D	literature: 9. Perrin, Theory	of Codes, Acade	mic Press, 1985				
Course languag Slovak	ge:						
Notes:							
Course assessment Total number of assessed students: 42							
А	В	C	D	Е	FX		
23.81	23.81 11.9 11.9 19.05 21.43 11.9						
Provides: prof.	RNDr. Mirko H	orňák, CSc.					
Date of last modification: 03.05.2015							
Approved: prof	Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J.	University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science							
Course ID: ÚM UAL/10	V/ Course name: Universal algebra						
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: 1., 3.							
Course level: II.							
Prerequisities:							
Conditions for course completion: According to results of the exam (written+oral).							
Learning outcomes: To obtain basic knowledge from universal algebra and to be able to apply it in concrete situations.							
Brief outline of the course: Algebraic structures. Homomorphisms and congruences. Direct and subdirect products. Terms. Free algebras. Birkhoff theorems about varieties.							
Recommended literature: S.Burris, H.P.Sankappanavar: A Course in Universal Algebra. Springer-Verlag, 1981. B. Jónsson: Topics in universal algebra, Springer-Verlag 1972. G. Grätzer: Universal Algebra, 2nd edition, Springer Verlag, 1979.							
Course language: Slovak							
Notes:							
Course assessment Total number of assessed students: 30							
А	В	C	D	Е	FX		
30.0	26.67	23.33	6.67	6.67	6.67		
Provides: prof. RNDr. Danica Studenovská, CSc.							
Date of last modification: 03.05.2015							
Approved: prof	Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚTVŠ/ ZKLS//13	Course name: Winter Ski Training Course					
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	nd the method: ce rse-load (hours): udy period: 504 esent					
Number of credits: 2						
Recommended semester/trimester of the course:						
Course level: I., II.	Course level: I., II.					
Prerequisities:						
Conditions for course completion:						
Learning outcomes:						
Brief outline of the c	Brief outline of the course:					
Recommended litera	iture:					
Course language:						
Notes:						
Course assessment Total number of assessed students: 81						
	abs	n				
32.1		67.9				
Provides: PaedDr. Im	rich Staško, doc. PhDr.	Ivan Šulc, CSc.				
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Mirko Horňák, CSc.						

University: P. J. Šafá	rik University in Košic	; ;		
Faculty: Faculty of S	cience			
Course ID: D PrávF/ZP2/11	Course name: Základy práva pre prirodovedcov II			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent			
Number of credits: 4				
Recommended semester/trimester of the course:				
Course level: II.				
Prerequisities:				
Conditions for course completion:				
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment Total number of asses	ssed students: 95			
	abs	n		
	97.89	2.11		
Provides:				
Date of last modification: 03.05.2015				
Approved: prof. RNI	Dr. Mirko Horňák, CSc			