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University: D. I. Čefé			
University: P. J. Safarik University in Kosice			
Faculty: Faculty of Science			
Course ID: ÚINF/ PfMRI/19	Durse ID: ÚINF/Course name: Advanced fMRI data AnalysisMRI/19		
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 ECTS cr	edits: 9		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
 Brief outline of the course: Advanced fMRI data Analysis This course provides background and tools for advanced fMRI data analysis using MVPA This course includes thorough introductions to: Advanced GLM modeling Intro to machine learning Multi-voxel Pattern Analysis: A neuroscientific perspective Multi-voxel pattern analysis v/s Univariate CosmoMVPA toolset Split half correlation analysis Search Light analysis SVM and other classifiers 			
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 1			
abs n			
100.0 0.0			
Provides: doc. Ing. N	Provides: doc. Ing. Norbert Kopčo, PhD., doc. RNDr. Jozef Jirásek, PhD.		
Date of last modification: 23.01.2020			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ TZLD/15	Course ID: ÚINF/ Course name: Algorithmically unsolvable problems CZLD/15 Course name: Algorithmically unsolvable problems		
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 9		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes: To understand basic r and the grades of uns	Learning outcomes: To understand basic notions of algorithmically unsolvable problems, mutual reduction of problems and the grades of unsolvability.		
Variants of halting pr Undecidability of the Relationship betweer Algorithmical unsolv Diofantesian equation Mutual reduction of p	be theory of natural numbers, nundecidability and complete rability of some mathematica ns and non-existence of an a problems and the grades of u	cal unsolvability. Goedel's a Tarski's theorem. teness. al problems. lgorithm for existence of their solutions. insolvability.	
 Recommended literature: 1. BARWISE, J. ed.: Handbook of mathematical logic, North Holland, 1977. 2. KLEENE, S. C.: Introduction to metamathematics, Van Nostrand, 1952. 3. MENDELSON, E.: Introduction to mathematical logic, Van Nostrand, 1963. 4. DAVIS, M.: Hilbert's tenth problem is unsolvable, Amer. Math. Monthly, 1973, pp.233-296. 			
Course language:			
Notes:			
Course assessment Total number of assessed students: 1			
N P			
0.0 100.0			
Provides: prof. RND	r. Stanislav Krajči, PhD.		
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SALD/15	Course ID: ÚINF/ Course name: Algorithms on strings		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present			
Number of ECTS cr	edits: 8		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:	Notes:		
Course assessment Total number of assessed students: 7			
N P			
0.0 100.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc.			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ CZC/15	Course ID: ÚINF/ Course name: Citation in international scientific journal		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	edits: 10		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
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: 11			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ CDC/15	Course ID: ÚINF/ DC/15Course name: Citation in local scientific journal		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:			
Course assessment Total number of assessed students: 0			
abs n			
0.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ CM/15	ourse ID: ÚINF/ Course name: Citation in monograph M/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 20		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
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: 0			
abs n			
0.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science			
Course ID: ÚINF/ SDPR/15	Course ID: ÚINF/ Course name: Co-worker of a local project DPR/15		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 64			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science			
Course ID: ÚINF/ SMPR/15	Course ID: ÚINF/Course name: Co-worker of an international projectMPR/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 15		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:			
Course assessment Total number of assessed students: 11			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šaf	árik University in Košice
Faculty: Faculty of	Science
Course ID: ÚINF/ VYMD/15	Course name: Computational complexity and models
Course type, scope Course type: Lectu Recommended cou Per week: 2 Per st Course method: pr	and the method: are arse-load (hours): udy period: 28 resent
Number of ECTS c	redits: 9
Recommended sem	ester/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cour Written test combine	rse completion: ed with an oral examination.
Learning outcomes Providing en extend of algorithms, and fu about reducibility ar	: ed backgroung in the area of efficient computations, computational complexity indamental time and space complexity classes, hardest complete problems, and nong problems.
Brief outline of the Basic computational complexity; determ NL, P, NP, PSPAC complexity classes; computations and hi	course: I models; relations among different models with respect to their computational inistic and nondeterministic computations; basic complexity classes - L, CE, NPSPACE; reducibilities of problems; complete languages in basic hierarchy and translation theorems for time and space; relativization; alternating ferarchies.
Recommended liter J.E. Hopcroft, R.Mc computation, Addise M. Sipser: Introduct S. Arora, B. Barak:	ature: otwani, J.D. Ullman: Introduction to automata theory, languages, and on-Wesley, 2007. tion to the Theory of Computation, Thomson, 2nd edition, 2006. Computational Complexity: A Modern Approach, Cambridge Univ. Pess,

2009.

C. Calude and J. Hromkovič: Complexity: A Language-Theoretic Point of View, in G. Rozenberg and A. Salomaa, Handbook of Formal Languages II, Springer, 1997.

G.Brassard, P.Bradley: Fundamentals of algorithmics, Prentice Hall, 1996.

Ch. H. Papadimitriou: Computational Complexity, Addison-Wesley, 1994.

D.P.Bovet, P.Crescenzi: Introduction to the theory of complexity, Prentice Hall, 1994.

Course language:

Notes:

Course assessment Total number of assessed students: 26	
N	р
0.0	100.0
Provides: prof. RNDr. Viliam Geffert, DrSc.	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Viliam Geffert, DrSc.	

University: P. J. Šafá	University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚINF/ PGOD/15	Course name: Computer graphics and image processing			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present			
Number of ECTS cr	edits: 8			
Recommended seme	ster/trimester of the cours	2:		
Course level: III.				
Prerequisities:				
Conditions for cours	se completion:			
Learning outcomes: To introduce the bas image, the image pre	Learning outcomes: To introduce the basic elements of the visual system, internal and external representations of an image, the image pre-processing methods and applications for surface visual inspection.			
Brief outline of the course: Introduction to computer vision. Collecting and storing images. Capturing and digitizing. Representation of the image - the image space. Color models. Multispectral images. Properties of digital images. Local operations. Global operations. Active contours. Segmentation. Texture, variety of symptoms. 3D reconstruction and visualization. Chaos and fractals.				
 Recommended literature: 1. ŠONKA, P., HLAVÁČ, V., BOYLE: Image processing, Analysis and Machine Vision, 2nd edition, International Thomson Publishing Inc., 1999. 2. TURCEZAN, M., JAIN, A.K.: Texture analysis. The handbook of pattern recognition and computer vision. World Scientific Pub. Co., 1998. 				
Course language:				
Notes:				
Course assessment Total number of asse	Course assessment Total number of assessed students: 9			
	N	Р		
	0.0	100.0		
Provides: doc. RNDr	. Csaba Török, CSc., doc. R	NDr. Jozef Jirásek, PhD.		
Date of last modifica	Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚINF/ KRYD/15	Course name: Cryptology			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 9			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.				
Prerequisities:				
Conditions for cours Witten and oral exam	se completion:			
Learning outcomes: To learn theoretical b be used in cryptograp in this area of compu	Learning outcomes: To learn theoretical background and standard methods of computer algebra and know how they can be used in cryptographic systems and cryptoanalytic methods. To know current trends of research in this area of computer science.			
Brief outline of the c Special parts of con big numbers, arithm cryptography and cry	Brief outline of the course: Special parts of computational algebra - rings of polynoms, cyclic groups, factorization of big numbers, arithmetic of eliptic curves. Actual problems of symmetric and nonsymmetric cryptography and cryptographysis.			
 Recommended literature: 1. ROSEN, K. H.: Elementary Number Theory and Its Applications, Addison Wesley, 2000 2. STINSON, D. R.: Cryptography. Theory and Practie, CRC Press, 2002 3. MEZENES, A.,. van Oorschot, P., Vanstone, S.: Handbook of Applied Cryptography, CRC Press, 1996 4. BLAKE, I. F. Seroussi, G. Smart, N.P.: Elliptic Curves in Cryptography CUP 1999 				
Course language:	Course language:			
Notes:	Notes:			
Course assessment Total number of asse	Course assessment Total number of assessed students: 6			
	N	Р		
	0.0	100.0		
Provides: prof. RND	r. Gabriel Semanišin, PhD.,	doc. RNDr. Jozef Jirásek, PhD.		
Date of last modifica	Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.			

r				
University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚINF/ SDSD/15	Course name: Data and signal processing			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 8			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes: Mastering the basics	of data and signal processin	g methods and appropriate software.		
their leveraging is con- methods for solution of to understand randor model types.	The list of both applications based on advanced data and signal processing methods and the areas of their leveraging is continuously rising. The subject acquaints the students with the most significant methods for solution of tasks in signal processing and the appropriate software. It helps the students to understand random phenomena in science and technology and clarify the differences in data model types.			
Recommended litera [1] Steven T. Karris, [2] Zarchan P., Funda [3] Mohinder S.G., K 2008 [4] CONGDON P., B [5] Albert J., Bayesia	 Recommended literature: [1] Steven T. Karris, Signals and Systems with MATLAB, Orchard Publications, 2008 [2] Zarchan P., Fundamentals of Kalman Filtering, A Practical Approach, AIAA, 2005 [3] Mohinder S.G., Kalman filtering, Theory and Practice Using MATLAB, John Wiley & Sons, 2008 [4] CONGDON P., Bayesian Statistical Modelling, John Wiley & Sons, 2006 [5] Albert L. Bayesian Computation with R. Springer, 2009 			
Course language:	Course language:			
Notes:	Notes:			
Course assessment Total number of asses	Course assessment Total number of assessed students: 8			
	N P			
	0.0	100.0		
Provides: doc. RNDr	. Csaba Török, CSc.			
Date of last modifica	Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.			

University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science			
Course ID: ÚINF/ SIZD/15	Course name: Data processing and information profit			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 5			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes: Overview of stochast obtaining information	Learning outcomes: Overview of stochastic and numerical methods of processing data and signals, their modeling and obtaining information from them.			
Brief outline of the c States, representation data, classification of approximation, spline analysis. Entropy and	Brief outline of the course: States, representation of dependencies and statistical models. Search schema and dependencies in data, classification of objects, parametric and nonparametric methods, smoothing data, piecewise approximation, splines, multivariate methods. Discriminant, cluster, factor, Fourier and wavelet analysis. Entropy and information function.			
Recommended literature: - E.Alpaydin: Introduction To Machine Learning, MIT Press, 2004 - S.Mallat, A Wavelet Tour of Signal Processing, Academic Press, 1999 - J.Anděl: Matematická statistika, SNTL 1985				
Course language:				
Notes:				
Course assessment Total number of asses	Course assessment Total number of assessed students: 1			
	N P			
	0.0	100.0		
Provides: doc. RNDr	. Csaba Török, CSc.			
Date of last modification: 03.05.2015				
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	rik University in Koši	ice		
Faculty: Faculty of S	Faculty: Faculty of Science			
Course ID: ÚINF/ ODZP/15	urse ID: ÚINF/ Course name: Defence of diploma thesis			
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: sent			
Number of ECTS cr	edits: 30			
Recommended seme	ster/trimester of the	course:		
Course level: III.				
Prerequisities:				
Conditions for cours	Conditions for course completion:			
Learning outcomes:	Learning outcomes:			
Brief outline of the c	ourse:			
Recommended litera	Recommended literature:			
Course language:	Course language:			
Notes:	Notes:			
Course assessment Total number of asses	ssed students: 14			
	N P			
	7.14 92.86			
Provides:				
Date of last modifica	Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ PPC/15	/ Course name: Direct pedagogical activities		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 3		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 178			
	abs n		
98.88 1.12			
Provides: doc. RNDr. Gabriela Andrejková, CSc.			
Date of last modifica	Date of last modification: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ DZS/15	ourse ID: ÚINF/ Course name: Dissertation examination ZS/15 Course name: Dissertation examination		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 20		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 31			
	N P		
	0.0 100.0		
Provides:			
Date of last modifica	Date of last modification:		
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science	<u> </u>			
Course ID: CJP/ AJD1/07	Course name: English Language for PhD Students 1				
Course type, sco Course type: Pr Recommended Per week: 2 Per Course method	pe and the met ractice course-load (h r study period: : present	thod: ours): 28			
Number of ECT	S credits: 2				
Recommended s	semester/trimes	ster of the cours	e: 1.		
Course level: III	•				
Prerequisities:					
Conditions for c Written assignmedistance mode of	ourse completi ents - profession f instruction usin	on: nal CV, short acao ng MS teams	demic biography	(200-350 words)).
Learning outcor	nes:				
Brief outline of t	the course:				
Recommended l	iterature:				
Course language	Course language:				
Notes:					
Course assessme Total number of	Course assessment Total number of assessed students: 649				
N	Ne	Р	Pr	abs	neabs
0.0	0.0	51.31	0.0	48.69	0.0
Provides: PhDr. Helena Petruňová, CSc., Mgr. Zuzana Kolaříková, PhD.					
Date of last mod	ification: 11.02	2.2021			
Approved: prof.	RNDr. Viliam (Geffert, DrSc.		_	

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: CJP/ AJD2/07	Course name: English Language for PhD Students 2
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 ECTS cr	edits: 3
Recommended seme	ster/trimester of the course: 2.
Course level: III.	
Prerequisities:	
Conditions for cours Distance mode of ins Test, oral exam in acc cjp/doktorandi-upjs/)	e completion: truction. Online consultations. ordance with the exam requirements (https://www.upjs.sk/filozoficka-fakulta/
Learning outcomes: Development of stu (selected aspects of pragmatic competence and specific purposes	idents' language skills, improvement of students' linguistic competencies English pronunciation, vocabulary and syntax), development of students's e (selected aspects of functional grammar) with focus on English for academic s. B2/C1 level of lanugage competence (according to CEFR.)
Brief outline of the c Specific aspecs of a (noun and verb colloc language, etc.), select etc.), selected function Academic communic	ourse: cademic and professional English with focus on vocabulary development cations, phrasal verbs, prepositional phrases, word-formation, formal/informal ted aspects of English grammar (prepositions, grammar tenses, passive voice, nal grammar (expressing opinion, cause/effect, arguments, examples, etc.). ation. Cross-language interference.
Recommended litera Kolaříková, Z., Petru UPJŠ Košice, 2015 McCarthy, M., O'Del Štepánek, L., J. De H 2011 Blašková, K.: Handbo Dušková, L. a kol.: H Bratislava, 1982 Armer, T.: Cambridge Porter, D.: Check you Oxford Collocations Ims.upjs.sk	 hture: ňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). II, F.: Academic Vocabulary in Use. CUP, 2008 aff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., ook of English for Postgraduate Students. Vyd. SPRINT Bratislava, 2007 lovorová angličtina pre vedeckých a odborných pracovníkov. Veda. e English for Scientists. CUP, 2011 ar vocabulary for Academic English. Macmillan Publishers Limited, 2008 Dictionary for students of English. OUP, 2002
Course language:	

B2/C1 level acc	cording to CEFR				
Notes:					
Course assessm Total number of	ent f assessed studen	ıts: 607			
Ν	Ne	Р	Pr	abs	neabs
0.33	0.0	92.59	1.32	5.77	0.0
Provides: PhDr.	Helena Petruňo	vá, CSc., Mgr. Z	uzana Kolaříkova	á, PhD.	<u>.</u>
Date of last mo	dification: 10.02	2.2021			
		~ ~ ~ ~ ~			

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ FKAD/15	Ourse ID: ÚINF/ Course name: Formal concept analysis CAD/15 Course name: Formal concept analysis		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present			
Number of ECTS cr	edits: 8		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 0			
	N P		
0.0 0.0			
Provides: prof. RNDr. Stanislav Krajči, PhD.			
Date of last modifica	Date of last modification: 03.05.2015		
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University P I Šafá	rik University in Košice
Faculty: Faculty of S	cience
Faculty . Faculty of S	
Course ID: UINF/ AFJD/15	Course name: Formal languages and finite-state automata
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 ECTS cro	edits: 9
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours Written test combined	e completion: d with an oral examinationi.
Learning outcomes: To obtain an overview as well as about conn	v in the efficient representation of regular languages and finite state automata, ection between automata and complexity theory.
Brief outline of the c Chomsky hierachy of nondeterministic, alt Regular expressions between finite state complexity for recog sensitive, and recursiv	ourse: languages and grammars. Finite state automata and its variants: deterministic, ernating, probabilistic, quantum one-way, two-way, reversal bounded. and grammars. Unary regular languages and their properties. Connection automata and complexity theory. Pushdown automata, time and space nition of context-free languages. Closure properties of contex-free, context- vely enumerable languages.
Recommended litera Current journal public of automata. J.E. Hopcroft, R.Mott computation, Addison J. Shallit: A second co 2009. M. Sipser: Introductio D.P.Bovet, P.Crescent J.van Leeuwen (ed.): G.Brassard, P.Bradley Course language:	ture: cations on the topic, especially those related to the descriptional complexity wani, J.D. Ullman: Introduction to automata theory, languages, and n-Wesley, 2001. ourse in formal languages and automata theory, Cambridge University press, on to the theory of computation, Thomson Course Technology, 2006. zi: Introduction to the theory of complexity, Prentice Hall, 1994. Handbook of theoretical science, North-Holland, 1990. y: Fundamentals of algorithmics, Prentice Hall, 1996.
Notes:	

Course assessment	
N	D
N	r
0.0	100.0
Provides: prof. RNDr. Viliam Geffert, DrSc.	
Date of last modification: 03.05.2015	
Approved: prof. RNDr. Viliam Geffert, DrSc.	

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ NEM/15	ourse ID: ÚINF/ Course name: Installing of new experimental methods EM/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 15		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.	Course level: III.		
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 3			
	abs n		
	100.0 0.0		
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ MK/15	Course ID: ÚINF/ Course name: International conference /IK/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of EC18 cr			
Recommended seme	ster/trimester of the cours	e:	
Course level: 111.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 72			
	abs	n	
	97.22 2.78		
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ ZKC/15	Course ID: ÚINF/ Course name: International currented journal KC/15		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	edits: 20		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:	Notes:		
Course assessment Total number of assessed students: 20			
	abs	n	
	100.0 0.0		
Provides:	Provides:		
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ ZNC/15	ourse ID: ÚINF/ Course name: International non-currented journal NC/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 8		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.	Course level: III.		
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 12			
	abs	n	
	100.0 0.0		
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ NZ/15	ourse ID: ÚINF/ Course name: International or local not-reviewed proceedings Z/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of EC18 cr			
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for course completion:			
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 20			
	abs	n	
	100.0 0.0		
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science			
Course ID: ÚINF/ ZMRI/18	Course name: Introduction to fMRI Data Analysis		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 0 Per study period: 42 / 0 Course method: present			
Number of ECTS cr	edits: 9		
Recommended seme	ster/trimester of the cours	e: 4.	
Course level: III.			
Prerequisities:			
Conditions for cours	se completion:		
Learning outcomes:			
 Brief outline of the course: This course provides the background necessary for designing, conducting, and interpreting fMRI studies. Each week offers an advanced topics seminar, a hands-on lab, and two lecture components. The course will also introduce basic neuroscience concepts necessary. This course includes thorough introductions to: Design methods for stimulus-, task-driven and resting-state fMRI experiments Workflows for model-based and data-driven analysis methods for fMRI data Analysis methods including MVPA, ICA, graph theory, computational modeling, and non-parametric statistics Guided exploration of special advanced topics including integrating functional MRI with PET, diffusion MRI data, connectomics, large-scale neuroimaging initiatives, Big Data analysis, and machine learning 			
Recommended litera	nture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 1			
	abs n		
	100.0 0.0		
Provides: doc. Ing. N	lorbert Kopčo, PhD.		
Date of last modifica	ntion: 23.01.2020		
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ DK/15	Course ID: ÚINF/ Course name: Local conference		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of EC18 cr	eulls: 2	a.	
Course level: III	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:	1.4.		
Conditions for course completion:			
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:	Notes:		
Course assessment Total number of assessed students: 27			
	abs	n	
	100.0 0.0		
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ DKZU/15	urse ID: ÚINF/ Course name: Local conference with international participation ZU/15 ZU/15		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	edits: 4		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for course completion:			
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:			
Course assessment Total number of assessed students: 44			
	abs	n	
	100.0	0.0	
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ DKC/15	Course ID: ÚINF/ Course name: Local currented journal OKC/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr			
Recommended seme	ster/trimester of the cours	e:	
Course level: 111.	Course level: III.		
Prerequisities:			
Conditions for course completion:			
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 1			
	abs	n	
	100.0 0.0		
Provides:			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ DNC/15	Course ID: ÚINF/ Course name: Local non-currented journal		
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present		
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for course completion:			
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:	Course language:		
Notes:	Notes:		
Course assessment Total number of assessed students: 4			
	abs	n	
	100.0	0.0	
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: ÚINF/ LOGD/15Course name: Logic		
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of ECTS credits: 9		
Recommended semester/trimester of the course:		
Course level: III.		
Prerequisities:		
Conditions for course completion:		
Learning outcomes: To understand basic notions of predicate logic (logic language, term, formula, axioms, proof, provability, truth, model, syntax and semantics, soundness, completeness) and to check student's ability to formalize concisely.		
Brief outline of the course: Predicate logic – logic language, syntax and semantics, term, formula. Axioms, proof, provability. Interpretation, truth, model. Correctness of the predicate logic. Boolean algebras. Syntactic model, completeness of predicate logic. Inductive structures in general. Aplications of logic in database systems.		
 Recommended literature: 1. GOLDSTERN, M., JUDAH H.: The Incompleteness Phenomenon, A New Course in Mathematical Logic, A K Peters, Wellesley, Massachusetts, 1995 2. ABITEBOUL, S. HULL, R., VIANU, V.: Foundations of databases, Addison-Wesley Publishing Co, 1995 		
Course language:		
Notes:		
Course assessment Total number of assessed students: 7		
N P		
0.0 100.0		
Provides: prof. RNDr. Stanislav Krajči, PhD.		
Date of last modification: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚINF/ POVK/15	Course ID: ÚINF/ Course name: Membership in a conference organizing committee POVK/15			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present				
Number of ECTS cr	edits: 2			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.	Course level: III.			
Prerequisities:				
Conditions for cours	Conditions for course completion:			
Learning outcomes:	Learning outcomes:			
Brief outline of the c	ourse:			
Recommended litera	Recommended literature:			
Course language:				
Notes:				
Course assessment Total number of assessed students: 21				
abs n				
100.0 0.0				
Provides:				
Date of last modification: 03.05.2015				
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.			

Faculty: Faculty of Science Course ID: ÚINF/ MUID/15 Course name: Methods of computational learning and artificial intelligence MUID/15 Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present Number of ECTS credits: 9 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: 1: Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: 1: Course the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, Y: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. dc CASTRO, L. N: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDREF, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 0.0 P 0.0 100.0 N P 0.0 100.0 P 0.0 100.0 P 0.0	University: P. J. Šafá	University: P. J. Šafárik University in Košice			
Course ID: ÚINF/ MUID/15 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 ECTS credits: 9 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KEECMAN, V: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S:: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course assessment Total number of assessed students: 10 P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. D Date of last modific	Faculty: Faculty of S	cience			
Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present Number of ECTS credits: 9 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To outerstand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press	Course ID: ÚINF/ MUID/15	Course name: Methods of computational learning and artificial intelligence			
Number of ECTS credits: 9 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). <td>Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre</td> <td colspan="4">Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present</td>	Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: N <	Number of ECTS cr	edits: 9			
Course level: III. Prerequisities: Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Conse assessement N <	Recommended seme	ster/trimester of the cours	2:		
Prerequisities:	Course level: III.				
Conditions for course completion: Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 Some systems Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 <tr< td=""><td>Prerequisities:</td><th></th><th></th></tr<>	Prerequisities:				
Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, C	Conditions for cours	e completion:			
Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems. Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	 Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. 				
Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using, motivation, basic knowledge. Mathematical methods for soft computing. Vector machines, neural networks, fuzzy logic systems.				
Course language: Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	 Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006 				
Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts). Course assessment Total number of assessed students: 10 N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	Course language:				
Course assessment Total number of assessed students: 10 P N P 0.0 100.0 Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	Notes: If necessary, teaching, mid-term and final evaluation will be by distance form (hangouts).				
NP0.0100.0Provides: doc. RNDr. Gabriela Andrejková, CSc.Date of last modification: 30.03.2020	Course assessment Total number of assessed students: 10				
0.0100.0Provides: doc. RNDr. Gabriela Andrejková, CSc.Date of last modification: 30.03.2020	N P				
Provides: doc. RNDr. Gabriela Andrejková, CSc. Date of last modification: 30.03.2020	0.0 100.0				
Date of last modification: 30.03.2020	Provides: doc. RNDr. Gabriela Andrejková, CSc.				

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: ÚINF/ MUID/18	Course name: Methods of computational learning and artificial intelligence			
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 0 Per Course method: pre	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present			
Number of ECTS cr	edits: 9			
Recommended seme	ster/trimester of the course	e:		
Course level: III.				
Prerequisities:				
Conditions for cours	e completion:			
 Learning outcomes: To learn a design of algorithmic models to solve increasingly complex problems. To understand methods used to solve problems in the following two areas: 1. Learning from experimental data - examples, samples, measurements, records, and observations. 2. Expert systems - types, analysis, construction. Brief outline of the course: To construct the adaptive mechanisms to be enable or facilitate intelligent behaviour in complex and changing environments. Learning and soft computing - real using motivation basic knowledge. Mathematical methods for 				
 Recommended literature: 1. KECMAN, V.: Learning and Soft Computing, MIT Press, 2001 2. BALDI, P., BRUNAK, S.: Bioinformatics, MIT Press, 2001 3. ENGELBRECHT, A. P. Computational Intelligence. John Willey & Sons, Ltd, 2005 4. de CASTRO, L. N.: Fundamentals of natural computing. Chapman & Hall/CRC, 2006 				
5. SMOLENSKY, P., LEGENDRE, G.: The harmonic mind. Vol. 1: Cognitive architectures. MIT Press, 2006				
Course language:				
Notes:				
Course assessment Total number of assessed students: 10				
N P				
	0.0 100.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc.				
Date of last modification: 20.09.2018				

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚINF/ MABD/17	Course ID: ÚINF/ Course name: Methods of computer and network security analysis MABD/17			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present				
Number of ECTS cr	edits: 9			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.				
Prerequisities:	Prerequisities:			
Conditions for course completion:				
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:	Course language:			
Notes:	Notes:			
Course assessment Total number of assessed students: 0				
N P				
0.0 0.0				
Provides: doc. RNDr. Jozef Jirásek, PhD.				
Date of last modification: 11.09.2017				
Approved: prof. RNDr. Viliam Geffert, DrSc.				

University: P. I. Šafárik University in Kočice			
Faculty: Faculty of Science			
Course ID: ÚINF/ Course name: Modelling a MBPD/15	nd analysis of security protocols		
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS credits: 9			
Recommended semester/trimester of the course			
Course level: III.			
Prerequisities:			
Conditions for course completion: Written and oral exam.			
Learning outcomes: To learn essential properties of the used cryptographic authentication and certification schemes and standard methods of attacks to them. To understand the theoretical background of a design of formal models and know how it is possible to utilise them in practise. To know the actual problems concerning the analysis of the security of cryptographic protocols.			
Brief outline of the course: Authentication and certification schemes, key distribution and maintenance. Formal description of cryptographic protocols and methods for their analysis. Algebraic and logic methods for attack modelling, utilisation of dynamic logical systems. Datalog for automatic security verification.			
 Recommended literature: 1. RYAN, P. Y. A., SCHNEIDER, S.A.: Modelling and Analysis of Security Protocols, Addison Wesley, 2001 2. HUTH, M., RYAN, M.: Logic in Computer Science - Modelling and Reasoning about Systems, CUP, 1999 3. MENEZES, A., van OORSCHOT, P., VANSTONE, S.: Handbook of Applied Cryptography, CRC Press, 1996 			
Course language:			
Notes:			
Course assessment Total number of assessed students: 4			
Ν	Р		
0.0 100.0			
Provides: prof. RNDr. Gabriel Semanišin, PhD., doc. RNDr. Jozef Jirásek, PhD.			
Date of last modification: 03.05.2015			

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	cience			
Course ID: ÚINF/ MNID/15	7/ Course name: Models of imperfect information			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present				
Number of ECTS cro	edits: 9			
Recommended seme	ster/trimester of the cours	e:		
Course level: III.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes: To give the students be and write scientific pa	Learning outcomes: To give the students basic techniques in systems processing imperfect information to be able read and write scientific papers in the area.			
Brief outline of the course:Belief and probability, Dempster-Shaferova belief. Necessity and possibility. Uncertainty in artificial intelligence.Fuzzy sets, constructions of fuzzy sets from statistic data.Uncertainty in artificial intelligence, Markov and Bayesian networks, belief updating, belief revision.				
 Recommended literature: 1. PEARL J.: Probabilistic Reasoning in Intelligent Systems: Networks of Plausible Inference, Morgan – Kaufmann, San Francisco, CA, 1988 2. JENSEN, F. V.: An Introduction to Bayesian networks, UCL Press, 1996 3. DUBOIS, D., Prade, H.: Possibility Theory. Plenum Press, N.York, 1988 4. PARIS, J. B.: The uncertain Reasoners Companion. Cambridge University Press, 1994 				
Course language:				
Notes:				
Course assessment Total number of assessed students: 2				
N P				
0.0 100.0				
Provides: prof. RNDr. Stanislav Krajči, PhD.				
Date of last modification: 03.05.2015				
Approved: prof. RNDr. Viliam Geffert, DrSc.				

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ NEK1/15	Course name: Neurocognition		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present			
Number of ECTS cr	edits: 9		
Recommended seme	ster/trimester of the cours	2.	
Course level: III.			
Prerequisities:			
Conditions for cours project, exam	e completion:		
Learning outcomes: Skills in quantitative analysis and modeling of neural data.			
Brief outline of the c	Brief outline of the course:		
Recommended literature: Gazzaniga M. (ed.): The New Cognitive Neurosciences. 2nd ed. MIT Press. 1999 Dayan P and LF Abbott: Theoretical Neuroscience - Computational and Mathematical Modeling of Neural Systems. MIT Press, 2001 Stillings et al.: Cognitive Science: An Introduction, 2nd ed., MIT Press, 1995 Hertz J, Krogh A and Palmer RG: Introduction to the theory of neural computation. Addison- Wesley 1991 Duda Hart and Stork (2001) Pattern Classification 2nd Edition New York: Wiley Interscience			
Course language: English			
Notes:			
Course assessment Total number of assessed students: 3			
	N P		
0.0 100.0			
Provides: doc. Ing. Norbert Kopčo, PhD.			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ IG/15	Course ID: ÚINF/ Course name: Obtaining of internal grant G/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 10		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 32			
abs n			
100.0 0.0			
Provides:			
Date of last modifica	Date of last modification: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ PVS/15	Course ID: ÚINF/ Course name: Patents, inventions, and software VS/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:	Course language:		
Notes:			
Course assessment Total number of assessed students: 11			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik Univers	ity in Košice	
Faculty: Faculty of S	cience		
Course ID: KPE/ PgVU/17	Course ID: KPE/ Course name: Pedagogy for university teachers		
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 28s Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimes	ster of the course:	
Course level: III.			
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: 32			
abs	abs n neabs		
100.0	100.0 0.0 0.0		
Provides: PaedDr. Renáta Orosová, PhD.			
Date of last modifica	Date of last modification: 12.02.2021		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ VYS/15	Course ID: ÚINF/ Course name: Presentation of results in a seminar /YS/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	Conditions for course completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 76			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science			
Course ID: ÚINF/ PAHD/15	Course name: Probabilist	ic and approximate algorithms		
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent			
Number of ECTS cr	edits: 9			
Recommended seme	ster/trimester of the cours	se:		
Course level: III.				
Prerequisities:				
Conditions for cours Written test combine	e completion: d with an oral examination.			
Learning outcomes: Providing en extende respect to their classi	Learning outcomes: Providing en extended backgroung in the area of probabilistic and approximation algorithms, with respect to their classification, efficiency, and probability of error.			
Brief outline of the course: Basic probabilistic computational models, Las Vegas algorithms, Monte Carlo algorithms. Probabilistic classes with polynomial time Foiling the adversary Hashing Fingerprinting				
 Recommended literature: 1. HROMKOVIČ, J.: Design and analysis of ranodmized algorithms. Springer-Verlag, 2005. ISBN 3-540-23949-9. 2. MOTWANI, R. and RAGHAVAN, P.: Randomized Algorithms. Cambridge University Press 1995. ISBN 0-521-47465-5 3. MITZEMANCHER, M. and UPFAL, E.: Probability and Computing: Randomized Algorithms and Probabilistic Analysis. Cambridge University Press 2005. ISBN 0-521-83540 2 4. HROMKOVIČ, J.: Communication Protocols - An Exemplary Study of the Power of Randomness. In: Handbook on Randomized Computing, P.Pardalos, S.Rajasekaran, J.Reif, J.Rolim, Eds., Kluwer Publ., 2001. 				
Course language:				
Notes:				
Course assessment Total number of assessed students: 10				
	N P			
	0.0 100.0			
Provides: prof. RNDr. Viliam Geffert, DrSc., prof. RNDr. Gabriel Semanišin, PhD.				
Date of last modifica	Date of last modification: 03.05.2015			

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science		
Course ID: KPPaPZ/PsVU/17	Course name: Psychology for University Lecturers	
Course type, scope an Course type: Lecture Recommended course Per week: Per study Course method: pres	ad the method: se-load (hours): period: 28s ent	
Number of ECTS cree	dits: 5	
Recommended semes	ter/trimester of the course:	
Course level: III.		
Prerequisities:		
Conditions for course Case study, micro-outp Current modifications board of the course.	completion: but, its analysis of the course for the semester 2020/2021 are listed in the electronic bulletin	
Learning outcomes: Acquisition of psychol teaching practice of do knowledge from cogn psychology, developm enable university teac of human developmen application in practice,	ogical skills necessary for professional, competent performance of university octoral students on the basis of acquisition and use of selected psychological nitive psychology, psychology of emotions and motivation, personality nental, social, pedagogical psychology and health psychology. They will chers - doctoral students to understand the psychological interpretation nt, upbringing and education. The acquired knowledge will enable better are closely linked to practice and are based on current knowledge of the field.	
Brief outline of the co University teacher and teacher in relation to h use of methods), in re selected areas of cogr psychology, social psy the university environm	urse: I his work in the teaching process with a focus on: imself (cognitive, personality, social competencies and competencies in the elation to students and as part of the teacher-student relationship based on hitive psychology, psychology of emotions and motivation, developmental chology, educational psychology and health psychology with application to ment.	
Recommended literat Alexitch, L. R. (2005) Schneider F., Gruman Fry, H., Ketteridge, S., education: Enhancing Mareš, J.: Pedagogicka Kniha psychologie. Un Čáp, J., Mareš, J.: Psyc Vágnerová, M.: Školn	ure: . Applying social psychology to education. Social Psychology.–Ed.: J., Coutts L.–Sage Publications, Inc, 205-228. , & Marshall, S. (2008). A handbook for teaching and learning in higher academic practice. Routledge. á psychologie. Portál, 2013. niversum, 2014 chologie pro učitele. Praha: Portál 2007. í poradenská psychológie pro pedagogy. Praha: Karolínum 2005.	
Course language:		

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

University: P. J. Šafárik University in Košice			
Faculty: Faculty of S	cience		
Course ID: ÚINF/ KVAD/15	Course name: Quantum algorithms		
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 0 Per study period: 28 / 0 Course method: present			
Number of ECTS cro	edits: 8		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours oral exam	e completion:		
Learning outcomes: To learn how quantum algorithms can be used for solving hard problems, in coding theory and in cryptology.			
Brief outline of the course: Quantum information. Principles and power of quantum computing. Fast factorisation. Qunatum search algorithm and ther application for NP-hard problems. The class BQNP - an analogy of the class NP. Quantum coding. Quantum kryptography.			
 Recommended literature: 1. GRUSKA, J. Quantum Computing. McGraw-Hill, 1999. 2. HIRVENSALO, M. Quantum Computing, Springer, 2004. 3. KITAEV, A.Y., SHEN, A.H., VYVALYI, M.N. Classical and Quantum Computation. American Mathematical Society, 2002. 4. NIELSEN, M.A., CHUANG, I.L. Quantum Computation and Quantum Information. Cambridge University Press, 2000. 5. STEEB, W. H., HARDY, Y. Problems And Solutions in Quantum Computing And Quantum Information. World Scientific Publishing Company, 2006. 			
Course language:			
Notes:			
Course assessment Total number of assessed students: 0			
	N P		
	0.0 0.0		
Provides: prof. RNDr. Gabriel Semanišin, PhD.			
Date of last modifica	tion: 03.05.2015		

Approved: prof. RNDr. Viliam Geffert, DrSc.

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ VPBP/15	Course ID: ÚINF/ Course name: Review of a bachelor thesis PBP/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
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: 49			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ RZ/15	Course ID: ÚINF/ Course name: Rewieved international or local proceedings		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of ECTS cr	edits: 10		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 95			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ SCI/15	ourse ID: ÚINF/ Course name: SCI citation CI/15		
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present			
Number of EC18 cr			
Recommended seme	ster/trimester of the cours	e:	
Course level: 111.	· · · · · · · · · · · · · · · · · · ·		
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: 5			
abs n			
100.0 0.0			
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS1a/15	Course name: Special branch seminar		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of EC15 cro			
Recommended seme	ster/trimester of the cours	e: 1.	
Course level: 111.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes: Cieľom predmetu je usmernenie študenta k samostatnému a tvorivému získavaniu najnovších poznatkov orientovaných na problematiku príbuznú téme dizertačnej práce, a takisto priebežné overovanie jeho schopností novozískané poznatky prezentovať.			
Brief outline of the course:			
Recommended litera	Recommended literature:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 36			
	abs	n	
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS1b/15	se ID: ÚINF/ Course name: Special branch seminar b/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 ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cou	-se: 2.	
Course level: III.			
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: 34			
	abs n		
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS2a/15	ID: ÚINF/ Course name: Special branch seminar		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cour	se: 3.	
Course level: III.			
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: 31			
	abs n		
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS2b/15	: ÚINF/ Course name: Special branch seminar		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cour	se: 4.	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 30			
	abs n		
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS3a/15	D: ÚINF/ Course name: Special branch seminar		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cou	rse: 5.	
Course level: III.			
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: 32			
	abs n		
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS3b/15	F/ Course name: Special branch seminar		
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present			
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cou	rse: 6.	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:	Learning outcomes:		
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 33			
	abs n		
100.0 0.0			
Provides: doc. RNDr. Gabriela Andrejková, CSc., prof. RNDr. Viliam Geffert, DrSc.			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS4a/15	Course name: Special b	anch seminar	
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 ECIS cr	edits: 5		
Recommended seme	ster/trimester of the cou	rse: /	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 22		
	abs	n	
	100.0	0.0	
Provides: doc. RNDr	. Gabriela Andrejková, CS	c., prof. RNDr. Viliam Geffert, DrSc.	
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ SOS4b/15	Course name: Special b	ranch seminar	
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 ECTS cr	edits: 5	-	
Recommended seme	ster/trimester of the cou	rse: 8.	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	Recommended literature:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 22		
	abs	n	
	100.0	0.0	
Provides: doc. RNDr	. Gabriela Andrejková, C	Sc., prof. RNDr. Viliam Geffert, DrSc.	
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNI	Dr. Viliam Geffert, DrSc.		

University: P. J. Šafán	University: P. J. Šafárik University in Košice		
Faculty: Faculty of Science			
Course ID: Dek. PF UPJŠ/JSD/14	Course name: Spring Scho	ool for PhD Students	
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 4d Course method: present			
Number of ECTS cro	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:			
Course assessment Total number of asses	ssed students: 154		
	abs	n	
	100.0	0.0	
Provides: prof. RNDr. Katarína Cechlárová, DrSc.			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ ZSP/15	Course name: Studies at f	oreign universities	
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent		
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
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 asses	ssed students: 19		
	abs	n	
	100.0	0.0	
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Viliam Geffert, DrSc.			

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of Science		
Course ID: ÚINF/ VPSV/15	Course name: Supervision	of a students scientific work
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent	
Number of ECTS cr	edits: 6	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
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 asses	ssed students: 21	
	abs	n
	100.0	0.0
Provides:		
Date of last modification: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of Science			
Course ID: ÚINF/ VBP/15	Course name: Supervision	n of bachelor thesis	
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent		
Number of ECTS cr	edits: 6		
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
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 asses	ssed students: 51		
	abs	n	
	100.0	0.0	
Provides:			
Date of last modifica	tion: 03.05.2015		
Approved: prof. RNDr. Viliam Geffert, DrSc.			
COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ TNSD/15	Course name: Theoretical	aspects of neural networks			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of ECTS credits: 9					
Recommended semester/trimester of the course:					
Course level: III.					
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes: To understand mathematical principles of neural networks and to know their capabilities. To be able to construct models of neural networks to solve some problems.					
Different models of neural networks and their capabilities to solve some problems. Computational complexity of neural networks, probabilistic neural networks, computational capability of neural networks, a transformation of neural networks to Turing machines, and Turing machines to neural networks. Approximation of functions using neural networks, Kolmogorov theorem and its proof, theorems connected to Kolmogorov theorem.					
 Recommended literature: 1. HASSOUN, M. H.: Fundamentals of artificial neural networks, The MIT Press, 1995 2. HAYKIN, S.: Neural Networks, A comprehensive foundation, Prentice-Hall, second edition 1999 3. HERTZ, J., KROGH, A., PALMER, R.G.: Introduction to the theory of neural computation, Addison Wesley, 1991 4. ROJAS, R.: Neural networks. A systematic introduction. Springer - Verlag, 1996 					
Course language:					
Notes:					
Course assessment Total number of assessed students: 24					
	N	Р			
	0.0 100.0				
Provides: doc. RNDr. Gabriela Andrejková, CSc.					
Date of last modifica	Date of last modification: 03.05.2015				

Approved: prof. RNDr. Viliam Geffert, DrSc.

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚINF/ PDS/18	Course name: Writing Dissertation Thesis				
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 EC18 credits: 0					
Recommended semester/trimester of the course:					
Prerequisities:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 2					
	Ν		Р		
	0.0		100.0		
Provides:					
Date of last modification: 20.02.2020					
Approved: prof. RNDr. Viliam Geffert, DrSc.					