CONTENT

1. Advanced neurocognitive data analysis	3
2. Certified training course	5
3. Citation in international scientific journal	6
4. Citation in local scientific journal	7
5. Citation in monograph	8
6. Co-investigator of the applied research project	9
7. Co-worker of a local project	
8. Co-worker of an international project	11
9. Computational complexity and models	12
10. Cryptology	14
11. Data and signal processing	15
12. Defence of diploma thesis	17
13. Dissertation examination	19
14. Elaboration of reviewer report	20
15. English Language for PhD Students 1	
16. English Language for PhD Students 2	23
17. Formal concept analysis	
18. Formal languages and finite-state automata	
19. Informatics Education: Didactic Approaches and Methods	
20. Installing of new experimental methods	
21. International Journal	
22. International Study Stay less than 30 Days	
23. International Study Stay more than 30 Days	
24. International conference abroad.	
25. Introduction to neurocognitive data analysis	
26. Local conference	
27. Local conference with international participation	
28. Local journal	
29. Logic	
30. Member of the internal project team	
31. Membership in a conference organizing committee	
32. Methods of computational learning and artificial intelligence	
33. Methods of computer and network security analysis	
34. Modelling and analysis of security protocols	
35. Models of imperfect information	
36. Monograph	
37. Monograph in a renowned publishing house	
38. Neurocognition	
39. Non-Reviewed International or National Proceedings	
40. Patents, inventions, and software	
41. Popularisation of science	
42. Presentation of results in a seminar	
43. Principal investigator of an internal grant (VVGS)	
43. Probabilistic and approximate algorithms	
44. Probabilistic and approximate argonums. 45. Q1 journal as co-author.	
45. Q1 journal as first or corresponding author	
40. Q1 journal as first of corresponding author	
48. Q2 journal as first or corresponding author	0/

49. Q3 journal as co-author	
50. Q3 journal as first or corresponding author	69
51. Q4 journal as co-author	70
52. Q4 journal as first or corresponding author	71
53. Quantum algorithms	72
54. Rewieved international or local proceedings	74
55. SCI citation	75
56. Scientific work after sending to the editorial office	76
57. Selected topics on numerical analysis and data mining	77
58. Special branch seminar	79
59. Special branch seminar	80
60. Special branch seminar	
61. Special branch seminar	
62. Special branch seminar	83
63. Special branch seminar	
64. Special branch seminar	85
65. Special branch seminar	
66. Spring School for PhD Students	
67. Supervision of a students scientific work	89
68. Teaching activities 1 h/s	
69. Teaching activities 2 h/s	
70. Teaching activities 3 h/s	
71. Teaching activities 4 h/s	
72. Theoretical aspects of neural networks	
73. Thesis consultant	
74. Thesis supervising	97

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	Science
Course ID: ÚINF/ PAND/25	Course name: Advanced neurocognitive data analysis
Course type, scope a Course type: Lectur Recommended cou Per week: 3 Per stu Course method: pro	re rse-load (hours): ıdy period: 42
Number of ECTS cr	redits: 9
Recommended seme	ester/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours Midterm exam. Proje	se completion: ect Final exam consisting of written and/or oral part.
Brief outline of the of 1. Advanced GLM m 2. Intro to machine le 3. Multi-voxel Patter 4. Multi-voxel patter 5. CosmoMVPA tool 6. Split half correlation 7. Search Light analy 8. SVM and other classified Recommended literation Oosterhof, N. N., Co pattern analysis of ne 2016. doi:10.3389/fm Connolly, A. C., Gur	nodeling earning n Analysis: A neuroscientific perspective n analysis v/s Univariate lset on analysis //sis assifiers ature: nnolly, A. C., and Haxby, J. V. CoSMoMVPA: multi-modal multivariate euroimaging data in Matlab / GNU Octave. Frontiers in Neuroinformatics,
Haxby, J. V., Gobbin	2608–2618, February 2012. i, M. I., Furey, M. L., Ishai, A., Schouten, J. L., and Pietrini, P. Distributed esentations of faces and objects in ventral temporal cortex. Science, 60, September 2001.
English	

Course assessment Total number of assessed students: 1	
abs	n
100.0	0.0
Provides: doc. Ing. Norbert Kopčo, PhD., univer	zitný profesor, doc. RNDr. Jozef Jirásek, PhD.
Date of last modification: 02.03.2025	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šafărik University in Košice Faculty: Faculty of Science Course ID: ÚINF/ COK/22 Course name: Certified training course Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present Number of ECTS credits: 4 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific kit He confronts his own knowledge and skills with other course participants, deve peer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 Provides: 0.0		ik University in Košice	
Course ID: ÚINF/ COK/22 Course name: Certified training course Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present Perweek: Per study period: Course method: present Number of ECTS credits: 4 Recommended semester/trimester of the course: Course level: III. Pererequisities: Conditions for course completion: Completion of a certified professional/training course. Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific ki He confronts his own knowledge and skills with other course participants, developeer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0			
COK/22 Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present Number of ECTS credits: 4 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific kn He confronts his own knowledge and skills with other course participants, deve peer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Faculty: Faculty of So	cience	
Course type: Recommended course-load (hours): Per week: Per study period: Course method: present Number of ECTS credits: 4 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific kn He confronts his own knowledge and skills with other course participants, developeer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Notes: Course assessment 100.0 0.0		Course name: Certified tr	raining course
Number of ECTS credits: 4 Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific kn He confronts his own knowledge and skills with other course participants, developeer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Course type: Recommended cour	se-load (hours):	
Recommended semester/trimester of the course: Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific knowledge and skills with other course participants, developeer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Total number of assessed students: 1 abs n 100.0 0.0	Course method: pre	sent	
Course level: III. Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific knowledge and skills with other course participants, developer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Number of ECTS cre	edits: 4	
Prerequisities: Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific knowledge and skills with other course participants, developer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Recommended seme	ster/trimester of the cours	se:
Conditions for course completion: Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific knowledge and skills with other course participants, developer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Course level: III.		
Completion of a certified professional/training course. Learning outcomes: The PhD student acquires up-to-date scientific knowledge, develops the capa work and familiarizes himself with the methodologies of making scientific knowledge and skills with other course participants, developeer discussion in the given scientific field. Brief outline of the course: Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Prerequisities:		
work and familiarizes himself with the methodologies of making scientific killerHe confronts his own knowledge and skills with other course participants, developeer discussion in the given scientific field.Brief outline of the course:Recommended literature:Course language:Notes:Course assessmentTotal number of assessed students: 1absn100.00.0		-	
Recommended literature: Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Learning outcomes:		
Course language: Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Learning outcomes: The PhD student acq work and familiarizes He confronts his own	uires up-to-date scientific l s himself with the methodo knowledge and skills with	knowledge, develops the capabilities of scientific of scientific knowledge available
Notes: Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Learning outcomes: The PhD student acq work and familiarizes He confronts his own peer discussion in the	uires up-to-date scientific l s himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific of scientific scientific knowledge available available scientific knowledge available scientific knowledge scientific knowledg
Course assessment Total number of assessed students: 1 abs n 100.0 0.0	Learning outcomes: The PhD student acq work and familiarizes He confronts his own peer discussion in the Brief outline of the co	uires up-to-date scientific l s himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific of scientific scientific knowledge available available scientific knowledge available scientific knowledge scientific knowledg
Total number of assessed students: 1 abs 100.0	Learning outcomes: The PhD student acq work and familiarizes He confronts his own peer discussion in the Brief outline of the co Recommended litera	uires up-to-date scientific l s himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific of scientific scientific knowledge available available scientific knowledge available scientific knowledge scientific knowledg
100.0 0.0	Learning outcomes: The PhD student acq work and familiarizes He confronts his own peer discussion in the Brief outline of the co Recommended litera Course language:	uires up-to-date scientific l s himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific of scientific scientific knowledge available available scientific knowledge available scientific knowledge scientific knowledg
	Learning outcomes: The PhD student acquest work and familiarizes He confronts his own peer discussion in the Brief outline of the construction Recommended litera Course language: Notes: Course assessment	uires up-to-date scientific less himself with the methodor knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific of scientific scientific knowledge available available scientific knowledge available scientific knowledge scientific knowledg
Provides:	Learning outcomes: The PhD student acquest work and familiarizes He confronts his own peer discussion in the Brief outline of the construction Recommended litera Course language: Notes: Course assessment	uires up-to-date scientific les himself with the methodo knowledge and skills with given scientific field. Durse: ture:	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available other course participants, develops the abilities o
I I V TIMUDI	Learning outcomes: The PhD student acquest work and familiarizes He confronts his own peer discussion in the Brief outline of the construction Recommended litera Course language: Notes: Course assessment Total number of asses	uires up-to-date scientific les himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available other course participants, develops the abilities of
Date of last modification: 08.11.2022	Learning outcomes: The PhD student acquest work and familiarizes He confronts his own peer discussion in the Brief outline of the construction Recommended litera Course language: Notes: Course assessment Total number of asses	uires up-to-date scientific les himself with the methodo knowledge and skills with given scientific field.	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available other course participants, develops the abilities of
Approved: prof. RNDr. Stanislav Krajči, PhD.	Learning outcomes: The PhD student acq work and familiarizes He confronts his own peer discussion in the Brief outline of the co Recommended litera Course language: Notes: Course assessment Total number of asses	uires up-to-date scientific les himself with the methodo knowledge and skills with given scientific field. Durse: ture: sed students: 1 abs 100.0	knowledge, develops the capabilities of scientific ologies of making scientific knowledge available other course participants, develops the abilities of

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ CZC/22	Course name: Citation in	n international scientific journal
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cr		
Recommended seme	ster/trimester of the cour	'se:
Course level: III.		
Prerequisities:		
Conditions for cours Obtained citation in a	e completion: foreign scientific journal	
researched field, bas problem in such a wa source demonstrates	ed on the ability to formula ay that generates new know the competence to comr ific knowledge, at the high	very well-founded scientific knowledge in the alate research questions, to reflect on a scientific wledge. At the same time, a citation in an indexed nunicate new knowledge, which is a significant test expert level.
Recommended litera	ture:	
Course language:		
Notes: Course assessment Total number of asse	ssed students: 13 abs	n
	100.0	0.0
Provides:	100.0	0.0
Date of last modifica	tion: 09 11 2022	
Approved: prot. RNI	Dr. Stanislav Krajči, PhD.	

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ CDC/22	Course name: Citation in	local scientific journal
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 2	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Citation in a national	-	
researched field, bas problem in such a wa source demonstrates	ed on the ability to formul ay that generates new know the competence to comm tific knowledge, at the highe	very well-founded scientific knowledge in the late research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed unicate new knowledge, which is a significant est expert level.
Differ outline of the C	.ouise.	
D	. 4	
Recommended litera	ature:	
Course language:	nture:	
	ssed students: 1 abs	n
Course language: Notes: Course assessment	ssed students: 1	n 0.0
Course language: Notes: Course assessment	ssed students: 1 abs	
Course language: Notes: Course assessment Total number of asse	ssed students: 1 abs 100.0	

University: P. J. Šafái	rik University in Košice	
Faculty: Faculty of So	cience	
Course ID: ÚINF/ CM/22	Course name: Citation i	n monograph
Course type, scope an Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:	
Number of ECTS cro	edits: 8	
Recommended seme	ster/trimester of the cou	rse:
Course level: III.		
Prerequisities:		
Conditions for cours Obtained citation regi	e completion: istered in SCI or Scopus.	
researched field, base problem in such a wa source demonstrates	ed on the ability to form by that generates new kno the competence to com ific knowledge, at the hig	d very well-founded scientific knowledge in the ulate research questions, to reflect on a scientific wledge. At the same time, a citation in an indexed municate new knowledge, which is a significant hest expert level.
Recommended litera	ture:	
Course language:		
Notes: Course assessment Total number of asses	ssed students: 0	
	abs	n
	0.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ SPAV/22	Course name: Co-investig	gator of the applied research project
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Co-investigator of th	se completion: e applied research project	
to the solution of the tasks. By solving an objective according own activities with c	e project objective of applied applied research project, 1 to the established procedure colleagues, to participate in t	cipate in teamwork, to bring his own contribution d research and to take responsibility for assigned he acquires the ability to implement the project , to follow the project schedule, to coordinate his he creation of applied research outputs. The PhD cal course of a grant project with a focus on applied
Brief outline of the o	course:	
Recommended liter	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 0	1
	abs	n
		0.0
	0.0	0:0
Provides:	0.0	0.0
Provides: Date of last modific:		

	arik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ SDPR/22	Course name: Co-work	er of a local project
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pr	rse-load (hours): dy period:	
Number of ECTS cr	redits: 10	
Recommended seme	ester/trimester of the cou	ırse:
Course level: III.		
Prerequisities:		
Conditions for cour Co-investigator of th	-	
The PhD student den	nonstrates the ability to pa	articipate in teamwork, to bring his own contribution
to the solution of t solving the domestic to the established pr colleagues, to partic from the practical co	he project objective and project, he acquires the ocedure, to follow the pro- ipate in the creation of o purse of the grant project.	articipate in teamwork, to bring his own contribution to take responsibility for the assigned tasks. By ability to implement the project intention according bject schedule, to coordinate his own activities with utputs. The PhD student gains valuable experience
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o purse of the grant project.	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pr colleagues, to partic from the practical co	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o purse of the grant project.	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liters Course language:	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o purse of the grant project.	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liter	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o purse of the grant project.	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liters Course language:	he project objective and c project, he acquires the ocedure, to follow the pro- ipate in the creation of o ourse of the grant project. course: ature:	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liter: Course language: Notes: Course assessment	he project objective and c project, he acquires the ocedure, to follow the pro- ipate in the creation of o ourse of the grant project. course: ature:	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liter: Course language: Notes: Course assessment	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o ourse of the grant project. course: ature:	to take responsibility for the assigned tasks. By ability to implement the project intention according oject schedule, to coordinate his own activities with utputs. The PhD student gains valuable experience
to the solution of t solving the domestic to the established pro- colleagues, to partic from the practical co Brief outline of the o Recommended liter: Course language: Notes: Course assessment	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o ourse of the grant project. course: ature: essed students: 36 abs	n
to the solution of t solving the domestic to the established pri- colleagues, to partic from the practical co Brief outline of the o Recommended liter: Course language: Notes: Course assessment Total number of asse	he project objective and e project, he acquires the ocedure, to follow the pro- ipate in the creation of o ourse of the grant project. course: ature: essed students: 36 abs 100.0	n

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ SMPR/15	Course name: Co-worker	of an international project
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 15	
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Membership in the re	e completion: esearch team of an internation	nal project.
Learning outcomes:		
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 26	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	
Approved: prof. RNI	Dr. Stanislav Krajči, PhD.	

University: P. J. Šafán	ik University in Košice
Faculty: Faculty of Seculty	cience
Course ID: ÚINF/ VYMD/15	Course name: Computational complexity and models
Course type, scope an Course type: Lectur Recommended cour Per week: 2 Per stue Course method: pre	e se-load (hours): dy period: 28
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: I with an oral examination.
-	d backgroung in the area of efficient computations, computational complexity nental time and space complexity classes, hardest complete problems, and ong problems.
 machines, RAM and E 2. Basic complexity EXPSPACE. 3. P versus NP, L verse 4. Polynomial time and problems. 5. NP-completenss of 6. Variants of SAT, pr 7. Other NP-complete salesman problem. 8. Subexponential det balancing. Restricted 9. Space complexity of 10. Problems complete Boolean formulas (QU) 	I space complexity, basic computational models: single- and multi-tape Turing RASP models, unit and logarithmic costs. classes: L, NL, P, NP, PSPACE, NPSPACE, EXPTIME, NEXPTIME sus NL. Examples of complete problems in these classes. d logarithmic space reducibilities, definition and basic properties of complete the Boolean formula satisfiability (SAT). oblems related to graph coloring. problems: vertex cover, Hamiltionian paths, subset sum, balancing, traveling erministic solutions for selected NP-complete problems: planar 3-colorability variants with more efficient solutions. elasses: Savitch theorem, inductive counting. te for NL, P, and PSPACE: graph accessibily (GAP), circuit-value, quantified BF). mslation theorems for time and space.

J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2007.

M. Sipser: Introduction to the Theory of Computation, Thomson, 2nd edition, 2006.

S. Arora, B. Barak: 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:

Slovak or english

Notes:

Content prerequisity: Basic knowlegde in the area of formal languages, automata theory, and programming.

programming.	
Course assessment	
Total number of assessed students: 30	
Ν	Р
0.0	100.0
Provides: prof. RNDr. Viliam Geffert, DrSc.	
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šafán	rik University in Koši	ice			
Faculty: Faculty of Science					
Course ID: ÚINF/ KRYD/15	51 85				
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	e ·se-load (hours): dy period: 28				
Number of ECTS cr	edits: 9				
Recommended seme	ster/trimester of the	course:			
Course level: III.					
Prerequisities:					
Conditions for cours Witten and oral exam	1				
	hic systems and cryp	rd methods of computer algebra and know how they can boanalytic methods. To know current trends of research			
	nputational algebra etic of eliptic curve	- rings of polynoms, cyclic groups, factorization of s. Actual problems of symmetric and nonsymmetric			
2. STINSON, D. R. : 3. MEZENES, A.,. va Press, 1996	ementary Number The Cryptography. Theor In Oorschot, P., Vanst	eory and Its Applications, Addison Wesley, 2000 y and Practie, CRC Press, 2002 tone, S.: Handbook of Applied Cryptography, CRC Elliptic Curves in Cryptography, CUP 1999			
Course language: Slovak or English					
Notes:					
Course assessment Total number of asses	ssed students: 6				
	N P				
	0.0	100.0			
Provides: doc. RNDr.	Jozef Jirásek, PhD.				
Date of last modifica	tion: 23.11.2021				

University: P. J. Šafár	rik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
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	e rse-load (hours): dy period: 28				
Number of ECTS cr	edits: 8				
Recommended seme	ster/trimester of the course:				
Course level: III.					
Prerequisities:					
Conditions for cours The ability to formula Project. Oral exam.	e completion: ate a problem in the acquired terminology and solve it within a project.				
signal processing and the types of stochasti	n of the course, the doctoral student will master the most relevant methods of l corresponding software. He will be able to explain the differences between c data models and thus analyze and simulate data, determine the scheme or attributes and obtain information.				
 Random processes Markov chains, Ma Stationary processed Martingales, Wiene Fourier transformation Wavelet analysis. Filtration, Kalman Modeling, Goodne Mutual information Nonparametric estimated scatterplot 	and time series, Moving average, ARIMA processes. arkov Chains Monte Carlo - MCMC. es and correlation function. er process and SDE. tion, FFT, Fourier series. filter. ss of fit tests; Likelihood and Bayesian principle. n, Fisher information, Akaike criterion. estimation and approximation: Nadaraya-Watson kernel, Loess(locally smoothing). ne and penalization, Multivariate adaptive regression spline (MARS),				
R.H. Shumway, D.S. Springer, 2017, ISBN Ch. J. Geyer, Bayesia www.stat.umn.edu/ge	ction to Stochastic Processes with R, Wiley, 2016, ISBN 978-1-118-74065-1 Stoffer, Time Series Analysis and Its Applications, Examples with R,				

Ch. K. Chui, G. Chen, Kalman Filtering, Spring Cs. Török, HP. Bernhard, Wavelet Shrinkage a JINR, Dubna, Russia, 1999 Nonparametric Regression Smoothers in R, http notes.html#simple-smoothers-in-r J. S. Simonoff, Smoothing Methods in Statistics	and Mutual Information, Communications of p://users.stat.umn.edu/~helwig/notes/smooth-		
Course language: Slovak or English			
Notes:			
Course assessment Total number of assessed students: 11			
N	Р		
0.0	100.0		
Provides: doc. RNDr. Csaba Török, CSc.			
Date of last modification: 23.11.2021			
Approved: prof. RNDr. Stanislav Krajči, PhD.			

	irik University in Košice
Faculty: Faculty of S	
Course ID: ÚINF/ ODZP/15	Course name: Defence of diploma thesis
Course type, scope a Course type: Recommended cou Per week: Per stuc Course method: pro	rse-load (hours): ły period:
Number of ECTS cr	redits: 30
Recommended seme	ester/trimester of the course:
Course level: III.	
Prerequisities:	
of academic fraud a Decision no. 21/202 University in Košice	se completion: is is the result of the student's own scientific research. It must not show elements nd must meet the criteria of good research practice defined in the Rector's 1, which lays down the rules for assessing plagiarism at Pavol Jozef Šafárik and its components. Fulfillment of the criteria is verified mainly in the process the process of thesis defense. Failure to do so is reason for disciplinary action
mastery of the theory	is has the character of a scientific work and the student demonstrates extensive and professional terminology of the field of study, acquisition of knowledge
program, as well as t student demonstrates ethical. Further detai	he ability to apply them creatively in solving selected scientific problem. The s the ability of independent scientific work in terms of content, formal and
program, as well as t student demonstrates ethical. Further detai requirements of final Brief outline of the o 1. Elaboration of the 2, Presentation of the	course: dissertation thesis in accordance with the instructions of the supervisor. e results of the dissertation thesis before the examination commission. ons from oponents and questions related to the topic of the dissertation thesis
program, as well as t student demonstrates ethical. Further detail requirements of final Brief outline of the o 1. Elaboration of the 2, Presentation of the 3. Answering question within the discussion Recommended liters	he ability to apply them creatively in solving selected scientific problem. The s the ability of independent scientific work in terms of content, formal and ls on the dissetation thesis are determined by Directive no. 1/2011 on the basic l theses and the Study Regulations of UPJŠ in Košice for doctoral studies. course: dissertation thesis in accordance with the instructions of the supervisor. e results of the dissertation thesis before the examination commission. ons from oponents and questions related to the topic of the dissertation thesis h.
program, as well as t student demonstrates ethical. Further detail requirements of final Brief outline of the o 1. Elaboration of the 2, Presentation of the 3. Answering question within the discussion Recommended liters The recommended liters	he ability to apply them creatively in solving selected scientific problem. The s the ability of independent scientific work in terms of content, formal and ls on the dissetation thesis are determined by Directive no. 1/2011 on the basic theses and the Study Regulations of UPJŠ in Košice for doctoral studies. course: dissertation thesis in accordance with the instructions of the supervisor. e results of the dissertation thesis before the examination commission. ons from oponents and questions related to the topic of the dissertation thesis ature:

Course assessment Total number of assessed students: 19	
N	Р
5.26	94.74
Provides:	·
Date of last modification: 11.01.2022	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šaf	árik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚINF/ DZS/15	Course name: Dissertation	on examination		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:			
Number of ECTS c	redits: 20		_	
Recommended sem	ester/trimester of the cour	'se:		
Course level: III.				
Prerequisities:				
Conditions for cour	se completion:			
Learning outcomes	:			
Brief outline of the	course:			
Recommended liter	ature:			
Course language:				
Notes:				
Course assessment Total number of ass	essed students: 33			
N P				
0.0 100.0				
Provides:				
Date of last modific	ation:			
Approved: prof. RN	Dr. Stanislav Krajči, PhD.			

	rik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚINF/ VPZP/22	Course name: Elaborati	ion of reviewer report		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:			
Number of ECTS cr	edits: 3			
Recommended seme	ester/trimester of the cou	ırse:		
Course level: III.				
Prerequisities:				
Conditions for cours Elaboration of review	-			
well as knowledge of assess a professional	a wide range of methods a l problem and its propos solution. He applies kno ield.	entifically based knowledge in the field of study, as and approaches. Demonstrates the ability to critically sed solution, as well as to evaluate it and possibly owledge and skills from the field of pedagogical		
Differ outline of the C				
Recommended liter	sture.			
Recommended litera	ature:			
Course language:	ature:			
	ssed students: 15			
Course language: Notes: Course assessment	ssed students: 15 abs	n		
Course language: Notes: Course assessment Total number of asse	ssed students: 15	n 0.0		
Course language: Notes: Course assessment Total number of asse Provides:	ssed students: 15 abs 100.0			
Course language: Notes: Course assessment Total number of asse Provides: Date of last modifica	ssed students: 15 abs 100.0	0.0		

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: CJP/ Course name: English Language for PhD Students 1 AJD1/07				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present				
Number of ECTS credits: 2				
Recommended semester/trimester of the course: 1.				
Course level: III.				
Prerequisities:				
Conditions for course completion: Completion of e-course English for PhD Students (lms.upjs.sk), consultations (1-3). Written assignments - Professional/Academic CV, Short Academic Biography.				
Learning outcomes: The development of students' language skills - reading, writing, listening, speaking; improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects; development of pragmatic competence - students acquire skills for effective and purposeful communication, with focus on Academic English and English for specific/professional purposes, level B2.				
Brief outline of the course: Specific aspects of academic and professional English with focus on correct pronunciation, vocabulary development (noun and verb collocations, phrasal verbs, prepositional phrases, word-formation, formal/informal language, etc.), selected aspects of English grammar (prepositions, grammar tenses, passive voice, etc.), academic writing (professional/academic CV, Short Academic Biography).				
Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí – cvičebnica. Košice, Vydavateľstvo ŠafárikPress, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. Štepánek, L., J. De Haff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s., 2011. Armer, T.: Cambridge English for Scientists. CUP, 2011. Ims.upjs.sk				
Course language: English, level B2 according to CEFR				

Course assessment Total number of assessed students: 813					
N	Ne	Р	Pr	abs	neabs
0.0	0.0	43.79	0.0	56.09	0.12
Provides: Mgr. Zuzana Kolaříková, PhD., Mgr. Ivana Kupková, PhD.					
Date of last modification: 06.09.2024					
Approved: prof. RNDr. Stanislav Krajči, PhD.					

LD2/07 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Number of ECTS credits: 3 Recommended semester/trimester of the course: 2. Course level: III. Prerequisities: Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list). English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. <t< th=""><th></th><th>COURSE INFORMATION LETTER</th></t<>		COURSE INFORMATION LETTER
Course ID: CJP/ (JD2/07 Course name: English Language for PhD Students 2 Course type, scope and the method: Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Yumber of ECTS credits: 3 Recommended semester/trimester of the course: 2. Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Acarning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional surposes, level B2. Strief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, Z., Pe	University: P. J. Šafá	rik University in Košice
LD2/07 Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Number of ECTS credits: 3 Recommended semester/trimester of the course: 2. Course level: III. Prerequisities: Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list). English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. <t< th=""><th>Faculty: Faculty of S</th><th>cience</th></t<>	Faculty: Faculty of S	cience
Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: distance, present Wumber of ECTS credits: 3 Recommended semester/trimester of the course: 2. Course level: III. Prerequisities: Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS)	Course ID: CJP/ AJD2/07	Course name: English Language for PhD Students 2
Recommended semester/trimester of the course: 2. Course level: III. Prerequisities: Conditions for course completion: Test, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) cearning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolafiková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. UpJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafařikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP,	Course type: Practic Recommended cour Per week: 2 Per stu	ce rse-load (hours): idy period: 28
Course level: III. Prerequisities: Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠaťaříkPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.	Number of ECTS cr	redits: 3
Prerequisities: Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Learning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional burposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.	Recommended seme	ester/trimester of the course: 2.
Conditions for course completion: Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) .carning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.	Course level: III.	
 Fest, oral exam in accordance with the exam requirements (available at the web-site of the LTC and in MS TEAMS) Fearning outcomes: The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional burposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008. 	Prerequisities:	
The development of students' language skills - reading, writing, listening, speaking, improvement of their linguistic competence - students acquire knowledge of selected phonological, lexical and syntactic aspects, development of pragmatic competence - students can efectively use the anguage for a given purpose, with focus on Academic English and English for specific/professional purposes, level B2. Brief outline of the course: Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development (formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafařikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.		-
Academic communication (self-presentation, presenting at scientific meetings and conferences). Specific aspects of academic and professional English with focus on vocabulary development formality, academic word-list), English grammar (passive voice, nominalisatio), language functions (expressing opinion, cause/effect, presenting arguments, giving examples, describing graphs/charts/schemes, etc.). Cross-language interference. Recommended literature: Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021.	The development of a of their linguistic co and syntactic aspects	students' language skills - reading, writing, listening, speaking, improvement ompetence - students acquire knowledge of selected phonological, lexical s, development of pragmatic competence - students can efectively use the
Moore, J.: Oxford Academic Vocabulary Practice. OUP, 2017. Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Fomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021.	Academic communic Specific aspects of a (formality, academic functions (expressing	cation (self-presentation, presenting at scientific meetings and conferences). academic and professional English with focus on vocabulary development c word-list), English grammar (passive voice, nominalisatio), language g opinion, cause/effect, presenting arguments, giving examples, describing
Kolaříková, Z., Petruňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). UPJŠ Košice, 2021. Tomaščíková, S., Rozenfeld, J. Developing Academic English in Speaking and Writing. Vydavateľstvo ŠafárikPress, 2021. McCarthy, M., O'Dell, F.: Academic Vocabulary in Use. CUP, 2008.	Recommended litera	ature:
	Kolaříková, Z., Petru UPJŠ Košice, 2021. Tomaščíková, S., Roz Vydavateľstvo Šafári McCarthy, M., O'De Štepánek, L., J. De H 2011.	nňová, H., Timková, R.: Angličtina v akademickom prostredí (cvičebnica). zenfeld, J. Developing Academic English in Speaking and Writing. ikPress, 2021. II, F.: Academic Vocabulary in Use. CUP, 2008. Iaff a kol.: Academic English-Akademická angličtina. Grada Publishing, a.s.,
Course language: B2 level according to CEFR	Course language: B2 level according to	o CEFR
	Notes:	

Course assessment Total number of assessed students: 776					
N	Ne	Р	Pr	abs	neabs
0.26	0.0	94.07	1.03	4.51	0.13
Provides: Mgr. Zuzana Kolaříková, PhD.					
Date of last modification: 03.02.2025					
Approved: prof. RNDr. Stanislav Krajči, PhD.					

University: P. J. Šafárik University in Košice		
Faculty: Faculty of S	cience	
Course ID: ÚINF/ FKAD/15	Course name: Formal con	cept analysis
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	re rse-load (hours): dy period: 28	
Number of ECTS credits: 8		
Recommended seme	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for course completion: During consultations during the semester. Independent and creative mastery of theoretical and practical aspects of the issue and an overview of the current state of research and further direction, in the form of an oral exam, are evaluated.		
		features of formal conceptual analysis as one of ationship to other data-mining methods.
-	nceptual lattices. cept lattices. nalysis in terms of category t al concept analysis to other o	-
Kluwer Academic/Pl ISBN 0-306-46777-1 2. GANTER B, WILL	Radim. Fuzzy relational syst enum Publishers, [2002]. In LE R.: Formal Concept Ana	tems: foundations and principles. New York: ternational federation for systems research. lysis: Foundations and Applications, Lecture er-Verlag, ISBN 3-540-27891-5, 2005
Course language: Slovak or English		
Notes: Prerequisites: Logic		
Course assessment Total number of asses	ssed students: 1	
	Ν	Р
0.0 100.0		

Provides: doc. RNDr. Ondrej Krídlo, PhD.

Date of last modification: 23.11.2021

Approved: prof. RNDr. Stanislav Krajči, PhD.

University. D. I. Čatá	rik University in Košice
Faculty: Faculty of S	
Course ID: ÚINF/ 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	re rse-load (hours): Idy period: 28
Number of ECTS cr	edits: 9
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours Written test combined	se completion: d with an oral examinationi.
	d about efficient representation of regular languages and finite state automata, nection between automata and complexity theory.
nondeterministic, alt Regular expressions between finite state complexity for recog	Flanguages and grammars. Finite state automata and its variants: deterministic, ternating, 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 gnition of context-free languages. Closure properties of contex-free, context-vely enumerable languages.
of automata. J.E. Hopcroft, R.Mot computation, Addisor J. Shallit: A second c 2009. M. Sipser: Introduction D.P.Bovet, P.Crescen J.van Leeuwen (ed.):	cations on the topic, especially those related to the descriptional complexity wani, J.D. Ullman: Introduction to automata theory, languages, and
Course language: Slovak or English	
Notes: Content prerequisites graph theory.	Basic knowledge in the area of automata, formal languages, set theory, and

Course assessment Total number of assessed students: 14		
Ν	Р	
0.0	100.0	
Provides: prof. RNDr. Viliam Geffert, DrSc.		
Date of last modification: 23.11.2021		
Approved: prof. RNDr. Stanislav Krajči, PhD.		

University: P. J. Šafárik	University in Košice
---------------------------	----------------------

Faculty: Faculty of Science

Course ID: ÚINF/	Course name: Informatics Education: Didactic Approaches and Methods
IVDPM/25	

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours):

Per week: 1 / 2 **Per study period:** 14 / 28

Course method: present

Number of ECTS credits: 8

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

- Conditions for ongoing evaluation:
- 1. Microteaching with a sample solution of an algorithmic problem.
- 2. Assessment of administered didactic test.
- 3. Proposal for the preparation of a lesson with a 5E inquiry cycle.
- 4. Creation of an interactive educational aid.
- Conditions for the final evaluation:
- 1. Creation of a graded system of tasks for teaching selected topic of school informatics.

Conditions for successful completion of the course:

- Obtaining at least 50% of points for ongoing and final assignments.

Learning outcomes:

After completing this course, students are able to:

- acquire an overview of the objectives, content, modern methods and aids for teaching school informatics,

- create conceptual map, cognitive objectives and graded tasks collection for selected topic of school informatics,

- create a inquiry-based methodology of teaching a selected topic of school informatics.
- select and explain essential concepts for a selected topic of school informatics,
- create and present an assignment and a sample solution to an algorithmic problem,
- analyze and assess students' assignments and identify their misconceptions,

- design and discuss the methodology of teaching a selected topic of school informatics, which includes its own interactive teaching aid.

Brief outline of the course:

1. Maturita on informatics. Logical structure of the curriculum, conceptual mapping. Determination of specific educational objectives and creation of a concept map for a selected topic of school informatics.

2. Educational task, its forms, and parameters. A graded system of tasks.

3. Creation of a graded system of tasks for teaching a selected topic of school informatics.

4. Activating methods of teaching school informatics (problem-based learning, discussion, situational and staging methods).

5. Activating methods of teaching school informatics (project-based learning, flipped learning, educational games, scientific humor).

6. Inquiry-based learning, inquiry cycle, inquiry skills, levels of inquiry, 5E learning cycle.

7. Formative assessment, cognitive and metacognitive tools. Creating a worksheet with selected formative assessment tools.

8. Assessment of students' learning outcomes in school informatics. Didactic tests.

9. Assessment of student projects. Student portfolio.

10. Conceptual process in school informatics. Informatics concepts in informatics competitions (iBobor). Informatics concepts in activities outside the computer (Computer Science Unplugged).

11. Methodology of teaching selected informatics topics (coding, encryption, compression)

12. Methodology of teaching selected informatics topics (specifics of computer floaiting point arithmetics).

13. Methodology of teaching selected informatics topics (mathematical modelling and simulation).

Recommended literature:

[1] HAZZAN, Orit, Tami LAPIDOT and Noa RAGONIS, 2011. Guide to teaching computer science: an activity-based approach. New York: Springer. ISBN 9780857294425.

[2] LAU, William, 2017. Teaching Computing in Secondary Schools: A Practical Handbook [online]. Taylor & Francis Group, 211 p. [cited 2021-7-10]. ISBN 9781315298191. Available from: https://ebookcentral.proquest.com/lib/upjs-ebooks/detail.action?docID=5056529

[3] COMPUTER SCIENCE EDUCATION RESEARCH GROUP AT THE UNIVERSITY OF CANTERBURY, NEW ZEALAND. Computer Science Field Guide: An online interactive resource for high school students learning about computer science [online]. [cited 2021-7-10]. Available from: https://www.csfieldguide.org.nz/en/

[4] COMPUTER SCIENCE EDUCATION RESEARCH GROUP AT THE UNIVERSITY OF CANTERBURY, NEW ZEALAND. Computer Science without a computer [online]. [cited 2021-7-10]. Available from: https://csunplugged.org/en/

[5] QUEEN MARY, UNIVERSITY OF LONDON. Computer Science For Fun: A magazine where the digital world meets the real world [online]. [cited 2021-7-10]. Available from: http://www.cs4fn.org/

[6] GUNIŠ, Ján and Ľubomír ŠNAJDER, 2009. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Tvorba úloh a hodnotenie žiakov v predmete informatika. Bratislava: Štátny pedagogický ústav, 40 p. ISBN 978-80-8118-012-5. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/ tvorba uloh a hodnotenie.pdf

[7] GUNIŠ, Ján and Ľubomír ŠNAJDER, 2010. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Metodika výučby tematickej oblasti Informácie okolo nás. Bratislava: Štátny pedagogický ústav, 40 p. ISBN 978-80-8118-030-9. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/ metodika_informacie_okolo_nas.pdf

[8] GUNIŠ, Ján and Ľubomír ŠNAJDER, 2010. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Metodika výučby tematickej oblasti Komunikácia prostredníctvom IKT. Bratislava: Štátny pedagogický ústav, 32 p. ISBN 978–80–8118–036-1. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/ publikacie/metodika_komunikacia_prostrednictvom_ikt.pdf

[9] GUNIŠ, Ján and Ľubomír ŠNAJDER. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Metodika výučby oblastí Princípy fungovania IKT a Informačná spoločnosť. Bratislava: Štátny pedagogický ústav, 32 p. ISBN 978–80–8118–045-3. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/ publikacie/ metodika_informacna_spolocnost.pdf

[10] ČAPEK, Robert, 2015. Moderní didaktika: lexikon výukových a hodnoticích metod. Praha: Grada. Pedagogika (Grada). ISBN 978-80-247-3450-7.

[11] LUKÁČ, Štanislav, Ľubomír ŠNAJDER, Ján GUNIŠ and Zuzana JEŠKOVÁ, 2016. Bádateľsky orientované vyučovanie matematiky a informatiky na stredných školách [online]. Košice: Prírodovedecká fakulta UPJŠ v Košiciach [cited 2021-7-10]. ISBN 978-80-8152-471-4. Available from: https://unibook.upjs.sk/img/cms/2016/pf/bov.pdf

[12] SPENDLOVE, David, 2015. 100 Ideas for Secondary Teachers: Assessment for Learning [online]. Bloomsbury Publishing, 129 p. [cited 2021-7-9]. ISBN 9781472911018. Available from:: https://ebookcentral.proquest.com/lib/upjs-ebooks/detail.action?docID=1990785 GANAJOVÁ, Mária, Beáta BRESTENSKÁ, Ján GUNIŠ, et al., 2021. Formatívne hodnotenie vo výučbe prírodných vied, matematiky a informatiky. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach. ISBN 978-80-8152-973-3.

[13] GUNIŠ, Ján, Miloslava SUDOLSKÁ and Ľubomír ŠNAJDER, 2009. Ďalšie vzdelávanie učiteľov základných a stredných škôl v predmete informatika: Aktivizujúce metódy vo výučbe školskej informatiky. Bratislava: Štátny pedagogický ústav, 40 p. ISBN 978-80-89225-96-5. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/ aktivizujúce_metody.pdf

Course language:

slovak

Notes:

Course assessment

Total number of assessed students: 0

abs	n	
0.0	0.0	
Provides: doc. RNDr. Ľubomír Šnajder, PhD.		
Date of last modification: 27.10.2024		

Approved: prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šafa	árik University in Košice		
Faculty: Faculty of S	Science		
Course ID: ÚINF/ NEM/15	Course name: Installing of	f new experimental methods	
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	urse-load (hours): dy period: resent		
Number of ECTS c			
	ester/trimester of the cour	se:	
Course level: III.			
Prerequisities:			
Conditions for cour	se completion:		
Learning outcomes	:		
Brief outline of the	course:		
Recommended liter	ature:		
Course language:			
Notes:			
Course assessment Total number of asse	essed students: 5		
	abs	n	
	100.0	0.0	
Provides:			
Date of last modific	ation: 03.05.2015		
Approved: prof. RN	Dr. Stanislav Krajči, PhD.		

University: P. J. Šaf	árik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ ZC/22	F/ Course name: International Journal	
Course type, scope Course type: Recommended cou Per week: Per stu Course method: p	ırse-load (hours): dy period:	
Number of ECTS credits: 8		
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	r se completion: d in a foreign journal as an au	uthor/co-author.
level of ability to ide He demonstrates the applying them critic an innovative way, a according to the high	entify, evaluate, and apply co e ability to reflect on a scien ally. He demonstrates the co as well as to generate new or nest qualitative and ethical sta	/co-author, the PhD student demonstrates a high rrect scientific methods or research methodology. tific problem by using the latest approaches and mpetence to use existing theories and concepts in iginal scientific knowledge, which he can publish indards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the	course:	
Recommended liter	ature:	
Course language:		
Notes:		
Course assessment Total number of ass	essed students: 1	
	abs	n
	100.0	0.0
Provides:		
Provides: Date of last modific	ation: 08.11.2022	

E	rik University in Koši	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ ZSP1/22	Course name: International Study Stay less than 30 Days	
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cours Completion of a fore	se completion: ign study stay lasting	less than 30 days.
Learning outcomes: By completing a shore		D student demonstrates the ability to reflect on research
By completing a short problems and work of while being able to g in more than one lang in a group with the air of research, to practio	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu	D student demonstrates the ability to reflect on research s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c	rter study stay, the Phl critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level consible independent scientist, works independently and daries of knowledge and transferring them to other areas
By completing a shor problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera	rter study stay, the Phl critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera Course language:	rter study stay, the Phl critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level consible independent scientist, works independently and daries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the c Recommended litera	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu course: ature:	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level consible independent scientist, works independently and daries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera Course language: Notes: Course assessment	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu course: ature:	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level consible independent scientist, works independently and daries of knowledge and transferring them to other areas
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera Course language: Notes: Course assessment	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu course: ature:	s at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.
By completing a shorp problems and work of while being able to g in more than one lang in a group with the air of research, to practice Brief outline of the c Recommended litera Course language: Notes: Course assessment	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu course: ature: ssed students: 8 abs	at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.
By completing a shorproblems and work of while being able to g in more than one lang in a group with the air of research, to practic Brief outline of the of Recommended litera Course language: Notes: Course assessment Total number of asse	rter study stay, the Phi critically with sources enerate new knowledg guage. He acts as a resp m of pushing the boun ce and to the wider pu course: ature: ssed students: 8 abs 100.0	at an expert level and in an interdisciplinary context, ge. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.

	irik University in Koši		
Faculty: Faculty of S	Science		
Course ID: ÚINF/ ZSP2/22	Course name: International Study Stay more than 30 Days		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:		
Number of ECTS cr	edits: 10		
Recommended seme	ester/trimester of the	course:	
Course level: III.			
Prerequisities: ÚINI	F/ZSP/15		
Conditions for cour Completion of a fore	se completion:	more than 20 days	
	study stay, the PhD s	tudent demonstrates the ability to reflect on research	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider pu		
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the o	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the o Recommended liter	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the of Recommended liters Course language:	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the o Recommended liter	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider pul course: ature:	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the of Recommended liters Course language: Notes: Course assessment	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider pul course: ature:	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level ponsible independent scientist, works independently and daries of knowledge and transferring them to other areas	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the of Recommended liters Course language: Notes: Course assessment	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put course: ature:	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level bonsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the of Recommended liters Course language: Notes: Course assessment	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put course: ature: essed students: 1 abs	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level bonsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.	
By completing the s problems and work while being able to g in more than one lang in a group with the ai of research, to practi Brief outline of the of Recommended liters Course language: Notes: Course assessment Total number of asse	study stay, the PhD s critically with sources generate new knowledg guage. He acts as a resp m of pushing the bound ce and to the wider put course: ature: essed students: 1 abs 100.0	tudent demonstrates the ability to reflect on research at an expert level and in an interdisciplinary context, e. He is able to actively communicate at an expert level bonsible independent scientist, works independently and daries of knowledge and transferring them to other areas blic. He can competently argue and explain his ideas.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ MKZ/22	Course name: International conference abroad	
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 10	
Recommended seme	ester/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cours Active participation	se completion: in an international conferen	ce abroad.
demonstrates a high research methodolog scientific problem b competence to use e	level of ability to identify, gy in his scientific field. He by using the latest approac xisting theories and concep- nowledge and communicate	scientific conference abroad, the phD student evaluate, and apply correct scientific methods or e demonstrates the ability to reflect on a specific shes and applying them critically. Demonstrates ots in an innovative way, as well as generate new research results to a wider audience by adequate
Brief outline of the o	course:	
Recommended liter	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	essed students: 14	
	essed students: 14 abs	n
		n 0.0
	abs	
Total number of asse	abs 100.0	

Faculty: Faculty of S	•
Course ID: ÚINF/ UAND/25	Course name: Introduction to neurocognitive data analysis
Course type, scope a Course type: Lectu Recommended cou Per week: 3 Per stu Course method: pro	re rse-load (hours): Idy period: 42
Number of ECTS cr	edits: 9
Recommended seme	ester/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours Midterm exam. Proje Final exam consistin	H
1	the background necessary for designing, conducting, and interpreting fMR formatted as advanced seminars, combined with hands-on labs. The course
will also introduce ba	asic neuroscience concepts necessary.
Brief outline of the o 1. Design methods for 2. Design methods for 3. Workflows for mo 4. Workflows for dat 5. Analysis methods 6. Analysis using IC. 7. Computational mo 8. Parametric and no 9. Integrating function 10. Tools: FreeSurfer 11. diffusion MRI dat	asic neuroscience concepts necessary. course: or stimulus-driven and task-driven fMRI experiments. or resting-state fMRI experiments and other types. del-based analysis methods. a-driven analysis methods. using MVPA. A and graph theory. deling. n-parametric statistics. onal MRI with PET / EEG / MEG. c, FSL.
Brief outline of the o 1. Design methods for 2. Design methods for 3. Workflows for mod 4. Workflows for dat 5. Analysis methods 6. Analysis using IC. 7. Computational mod 8. Parametric and no 9. Integrating function 10. Tools: FreeSurfer 11. diffusion MRI dat 12. large-scale neuror Recommended litera	asic neuroscience concepts necessary. Fourse: or stimulus-driven and task-driven fMRI experiments. or resting-state fMRI experiments and other types. del-based analysis methods. a-driven analysis methods. using MVPA. A and graph theory. deling. n-parametric statistics. nal MRI with PET / EEG / MEG. c, FSL. ta, connectomics. imaging initiatives, Big Data analysis, and machine learning. hture: ok of Functional MRI Data Analysis. Cambridge University Press. 2011.

Notes:

Course assessment Total number of assessed students: 3		
abs	n	
100.0	0.0	
Provides: doc. Ing. Norbert Kopčo, PhD., univer	zitný profesor	
Date of last modification: 02.03.2025		
Approved: prof. RNDr. Stanislav Krajči, PhD.		

University: P. J. Šafa	árik University in Košice		
Faculty: Faculty of S	Science		
Course ID: ÚINF/ Course name: Local conference DK/15 Course name: Local conference			
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	ırse-load (hours): dy period:		
Number of ECTS credits: 2			
Recommended sem	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cour Active participation	se completion: in the home conference		
degree of ability to id in his scientific field using the latest appro- theories and concept	dentify, evaluate, and apply co d. He demonstrates the abili baches and applying them crit s in an innovative way, as we	conference, the PhD student demonstrates a high prrect scientific methods or research methodology ty to reflect on a specific scientific problem by ically. Demonstrates competence in using existing ll as generating new original scientific knowledge audience using adequate means and through the	
Brief outline of the	course:		
Recommended liter	ature:		
Course language:			
Notes:			
Course assessment Total number of assessed students: 32			
	abs n		
	100.0	0.0	
Provides:			
Date of last modific	ation: 08.11.2022		

- · · · · · · · · · · · · · · · · · · ·	rik University in Košice	
Faculty: Faculty of S		
Course ID: ÚINF/ Course name: Local conference with international participation DKZU/22 Course name: Local conference with international participation		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 5	
Recommended seme	ester/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for course Active participation	se completion: in a national conference with	h foreign participation.
ability to identify, ev	valuate and apply correct of	• • • • • • • • • • • • • • • • • • • •
scientific field. He de latest approaches and and concepts in an	emonstrates the ability to re d applying them critically. I innovative way, as well as	cientific methods or research methodology in his flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nee by adequate means and through Slovak or a
scientific field. He de latest approaches and and concepts in an communicate researce	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate researce foreign language.	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate researce foreign language. Brief outline of the c	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate researce foreign language. Brief outline of the construction Recommended literation	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate researce foreign language. Brief outline of the construction Recommended literation Course language:	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature:	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate researce foreign language. Brief outline of the of Recommended liters Course language: Notes: Course assessment	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature:	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and
scientific field. He de latest approaches and and concepts in an communicate research foreign language. Brief outline of the of Recommended liters Course language: Notes: Course assessment	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature:	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nee by adequate means and through Slovak or a
scientific field. He de latest approaches and and concepts in an communicate researce foreign language. Brief outline of the of Recommended liters Course language: Notes: Course assessment	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature: essed students: 22 abs	flect on a specific scientific problem by using the Demonstrates competence to use existing theories generate new original scientific knowledge and nee by adequate means and through Slovak or a
scientific field. He de latest approaches and and concepts in an in communicate research foreign language. Brief outline of the of Recommended liters Course language: Notes: Course assessment Total number of asse	emonstrates the ability to re d applying them critically. I innovative way, as well as ch results to a wider audier course: ature: essed students: 22 abs 100.0	n

	árik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ Course name: Local journal DC/22 Image: Documentary of the second		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS credits: 6		
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	r se completion: d in a national journal as auth	or/co-author.
He demonstrates the applying them critic an innovative way, a according to the high	e ability to reflect on a scien ally. He demonstrates the con as well as to generate new or nest qualitative and ethical sta	rrect scientific methods or research methodology. tific problem by using the latest approaches and mpetence to use existing theories and concepts in iginal scientific knowledge, which he can publish indards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the	course:	
Recommended liter	ature:	
Course language:		
Notes:		
	essed students: 1	
Notes: Course assessment	essed students: 1 abs	n
Notes: Course assessment		n 0.0
Notes: Course assessment	abs	
Notes: Course assessment Total number of asse	abs 100.0	

University: P. J. Šafárik University in Košice			
Faculty: Faculty of S	cience		
Course ID: ÚINF/ LOGD/15	LOGD/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.	Course level: III.		
Prerequisities:			
Conditions for cours Satisfiable understand	e completion: ding of basic concepts.		
Learning outcomes: Understanding of basic notions of mathematical logic (logic language, term, formula, axioms, proof, provability, truth, model, syntax and semantics, soundness, completeness) and 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: Slovak or English	Course language:		
Notes:			
Course assessment Total number of asses	ssed students: 11		
	Ν	Р	
0.0 100.0			

Provides: prof. RNDr. Stanislav Krajči, PhD.

Date of last modification: 23.11.2021

Approved: prof. RNDr. Stanislav Krajči, PhD.

	ărik University in Koši	
Faculty: Faculty of	Science	
Course ID: ÚINF/ Course name: Member of the internal project team SIG/22 SIG/22		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: p	urse-load (hours): dy period:	
Number of ECTS c	redits: 3	
Recommended sem	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for coun Co-worker of project	1	l grant schemes (VVGS)
	monstrates the ability to	o participate in teamwork, to bring his own contribution
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project.	o participate in teamwork, to bring his own contribution within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues, . The PhD student gains valuable experience from the
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course:	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues,
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course:	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues,
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter Course language:	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course:	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues,
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course: rature:	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues,
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter Course language: Notes:	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course: rature:	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues,
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter Course language: Notes: Course assessment	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course: rature: essed students: 5	within the internal grant system at UPJŠ. By solving ability to implement the project plan according to the t schedule, coordinate his own activities with colleagues, . The PhD student gains valuable experience from the
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter Course language: Notes: Course assessment	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course: rature: essed students: 5 abs	n
The PhD student der to the solution of t the internal VVGS established procedur and participate in th practical course of t Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of ass	monstrates the ability to the project objective v grant, he acquires the re, adhere to the project he creation of outputs. he grant project. course: rature: essed students: 5 abs 100.0	n

	arik University in Ko	ISICE
Faculty: Faculty of S	Science	
Course ID: ÚINF/ POVK/22Course name: Membership in a conference organizing committee		
Course type, scope a Course type: Recommended cou Per week: Per stuc Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	redits: 3	
Recommended seme	ester/trimester of th	ie course:
Course level: III.		
Prerequisities:		
Conditions for cours Work in the organizi		conference
By working in the o	organizing committe	ee of the conference, the PhD student demonstrates the
abilities and compete to manage the implem in writing using vario	organizing committe ences to organize a so nentation in terms of ous technical means a	ee of the conference, the PhD student demonstrates the cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona ssary, correctly recommend solutions or make independen
By working in the or abilities and competer to manage the implem in writing using varior level with various typ decisions.	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using various level with various typ decisions. Brief outline of the of	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces course:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using various level with various typ decisions. Brief outline of the of Recommended literation	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces course:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using various level with various typ	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces course:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using vario level with various typ decisions. Brief outline of the of Recommended litera Course language: Notes:	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces course: ature:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using various level with various typ decisions. Brief outline of the of Recommended literat Course language: Notes: Course assessment	organizing committe ences to organize a so nentation in terms of ous technical means a bes of people, if neces course: ature:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona
By working in the of abilities and compete to manage the implem in writing using various level with various typ decisions. Brief outline of the of Recommended literat Course language: Notes: Course assessment	ences to organize a so nentation in terms of ous technical means a bes of people, if neces course: ature:	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona ssary, correctly recommend solutions or make independen
By working in the or abilities and competer to manage the implem in writing using varior level with various typ decisions. Brief outline of the or Recommended literat Course language: Notes: Course assessment Total number of asse	ences to organize a so nentation in terms of ous technical means a bes of people, if neces course: ature: essed students: 21 abs	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona ssary, correctly recommend solutions or make independen
By working in the of abilities and compete to manage the implem in writing using various level with various typ decisions. Brief outline of the of Recommended literat Course language: Notes: Course assessment	ences to organize a so nentation in terms of ous technical means a bes of people, if neces course: ature: essed students: 21 abs 100.0	cientific or professional event independently or in a team time and content, to communicate effectively verbally and as needed, including in a foreign language at a professiona ssary, correctly recommend solutions or make independen

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S		
Course ID: ÚINF/ MUID/18Course name: Methods of computational learning and artificial intellig		
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	re rse-load (hours): dy period: 28	
Number of ECTS cr	edits: 9	
Recommended seme	ster/trimester of the course:	
Course level: III.		
Prerequisities:		
	roject focused on methods of computational learning and artificial intelligence. on of the written and oral part of the exam focused on computational learning	
1. Learning from exp	t methods used to solve issues in the following two areas: berimental data - examples, samples, measurements, records, or observations. ng structured human knowledge in the created systems - experience, expert	
 Probabilistic Learn Efficient algorithm Efficient Algorithm Efficient Algorithm VC dimension CS224N: Introduct CS224N: Word version CS224N: RNN and CS224N: RNN and CS224N: Machine CS224N: Convol CS224N: Subword CS224N: Context 	ses, learning algorithms, Boolean formulae and representations hing hs I ns II tion and word vectors ectors and word senses Word window classification, NN, PyTorch, RNN and d language models Matrix calculus and BP, Linguistic structure dependency translation Seq2Seq and attention (L8) utional Networks for NLP (L11) rd models (L12) tual word embeddings (L13): BERT ng contexts of use: Contextual representations and pretraining. ELMo, BERT	
Recommended litera		
1997.	Natural Language Processing with Deep Learning Stanford University	

2. Lectures CS224n: Natural Language Processing with Deep Learning, Stanford University, 2019

- 3. A. P. Engelbrecht: Computational Intelligence, John Wiley & Sons, Ltd, 2005,
- 4. V. Kecman: Learning and Soft Computing, MIT Press, 2001
- 5. V. Mařík, a kol.: Umělá inteligence 4, Academia, Praha, 2003
- 6. P. Baldi, S. Brunak: Bioinformatics, MIT Press, 2001

Course language:

Slovak or English

Notes:

Course assessment

Total number of assessed students: 18

Ν	Р
0.0	100.0

Provides: doc. RNDr. L'ubomír Antoni, PhD., doc. RNDr. Gabriela Andrejková, CSc.

Date of last modification: 14.11.2021

Approved: prof. RNDr. Stanislav Krajči, PhD.

University: P. J. Šaf	ărik University in Košice		
Faculty: Faculty of	Science		
Course ID: ÚINF/ MABD/17	Course name: Methods of	computer and network security analysis	
Course type, scope Course type: Lectu Recommended cou Per week: 2 / 2 Per Course method: pr	are / Practice arse-load (hours): r study period: 28 / 28		
Number of ECTS c	redits: 9		
Recommended sem	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cour	se completion:		
Learning outcomes	:		
Brief outline of the	course:		
Recommended liter	ature:		
Course language:			
Notes:			
Course assessment Total number of ass	essed students: 0		
N P			
	0.0 0.0		
Provides: doc. RND	r. JUDr. Pavol Sokol, PhD. e	t PhD.	
Date of last modific	ation: 11.09.2017		
Approved: prof. RN	Dr. Stanislav Krajči, PhD.		

University: P. J. Šafárik University in Košice			
Faculty: Faculty of S			
Course ID: ÚINF/ MBPD/15Course name: Modelling and analysis of security protocols		and 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 seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours Written and oral exam	-		
and standard methods formal models and kr			
Authentication and c of cryptographic prot	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: Slovak or English			
Notes:	Notes:		
Course assessment Total number of asses	Course assessment Total number of assessed students: 4		
	Ν	Р	
	0.0	100.0	
Provides: doc. RNDr	Jozef Jirásek, PhD.		
Date of last modifica	Date of last modification: 23.11.2021		

Approved: prof. RNDr. Stanislav Krajči, PhD.

	irik University in Košice
Faculty: Faculty of S	Science
Course ID: ÚINF/ MNID/15	Course name: Models of imperfect information
Course type, scope a Course type: Lectur Recommended cou Per week: 2 Per stu Course method: pre	re irse-load (hours): idy period: 28
Number of ECTS cr	redits: 9
Recommended seme	ester/trimester of the course:
Course level: III.	
Prerequisities:	
the current state of re oral exam, are evalua Learning outcomes:	ative mastery of theoretical and practical aspects of the issue, an overview of esearch and open problems and further direction, in the form of a written and ated. basic techniques in systems processing imperfect information to be able read
Brief outline of the c Belief and probabili artificial intelligence Fuzzy sets, construct	course: ity, Dempster-Shaferova belief. Necessity and possibility. Uncertainty in
	ature: pilistic Reasoning in Intelligent Systems: Networks of Plausible Inference, a, San Francisco, CA, 1988
2. JENSEN, F. V.: An 3. DUBOIS, D., Prad	n Introduction to Bayesian networks, UCL Press, 1996 de, H.: Possibility Theory. Plenum Press, N.York, 1988 uncertain Reasoners Companion. Cambridge University Press, 1994

prerequisites: Logic

Course assessment Total number of assessed students: 2	
N	Р
0.0	100.0
Provides: doc. RNDr. Ondrej Krídlo, PhD.	
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

v	árik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ MONB/22	Course name: Monograp	h
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	rse-load (hours): dy period:	
Number of ECTS c	redits: 20	
Recommended sem	ester/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cour Co-author of the mo	-	
evaluate, and apply of to reflect on a scient demonstrates the con as to generate new of qualitative and ethic	correct scientific methods of tific problem by using the l mpetence to use existing the original scientific knowledge cal standards of the field.	demonstrates a high level of ability to identify, r research methodology. It demonstrates the ability atest approaches and applying them critically. He eories and concepts in an innovative way, as well ge, which he can publish according to the highest The doctoral student demonstrates the ability to gestions, to finalize his own ideas.
Brief outline of the	course:	
Recommended liter	ature:	
Course language:		
Notes:		
Course assessment		
Total number of asse	essed students: 0	
Total number of asso	abs	n
Total number of asse		n 0.0
Total number of asse	abs	
	abs 0.0	

University: P. J. Šafa	arik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ MONA/22	Course name: Monograph	n in a renowned publishing house
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pr	rse-load (hours): dy period:	
Number of ECTS c	redits: 40	
Recommended sem	ester/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cour Co-author of a mono	se completion: ograph in a renowned publis	hing house.
He demonstrates the applying them critic in an innovative wa publish according to	ability to reflect on a scient ally. He demonstrates the c y, as well as to generate r the highest qualitative and c	brrect scientific methods or research methodology. tific problem by using the latest approaches and competence to use existing theories and concepts new original scientific knowledge, which he can thical standards of the field. The doctoral student d respond to reviewers' suggestions, to finalize his
Brief outline of the	course:	
Recommended liter	ature:	
Course language:	-	
Notes:	<u>_</u>	
Course assessment Total number of asse	essed students: 0	
	abs	n
	0.0	0.0
Provides:		
Provides: Date of last modific	ation: 08.11.2022	

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚINF/ NEK1/15	Course name: Neurocognition
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	e / Practice rse-load (hours): study period: 28 / 28
Number of ECTS cr	edits: 9
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
	-
Learning outcomes: Skills in quantitative their neural basis in t	analysis and modeling of neural data. Overview of cognitive functions and he human brain.
 Hearing and speec. Spatial hearing Auditory scene and Vision: Intro - path Binocular and spati Visual motion percession Sensory and motor Memory. Attention. Emotions, motivation 	ransmission, CNS, experimental methods h: general intro alysis, "Cocktail party effect", informational masking. ways, perception, illusions. ial vision. eeption. system.
 2020. ISBN-13: 978- 2. Dayan P and LF A Modeling of Neural S 3. Thagard P: Mind: 978-0262701099 4. KANDEL, E. R., S McGraw-Hill, 2021 I 5. HERTZ, J., KROG 	un G., Gazzaniga M. (ed.): The Cognitive Neurosciences. 6th ed. MIT Press.

Course language: English	
Notes: Content prerequisities: programming, mathemati psychology	cs, basics of neurobiology and cognitive
Course assessment Total number of assessed students: 5	
Ν	Р
0.0	100.0
Provides: doc. Ing. Norbert Kopčo, PhD., univer	zitný profesor
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University. 1. J. Bale	rik University in Košice	
Faculty: Faculty of S		
Course ID: ÚINF/ NRZ/22		wed International or National Proceedings
Course type, scope a Course type: Recommended cou Per week: Per stuc Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr		
	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours A publication publish	-	gn or national journal as an author/co-author.
demonstrates the ab methodology. He de	ility to identify, evaluate, a monstrates the ability to re ying them critically. He dem	hal journal as an author/co-author, the PhD student nd apply correct scientific methods or research flect on a scientific problem by using the latest constrates the competence to use existing theories
and concepts in an in he can publish acco	rding to the highest qualitat	generate new original scientific knowledge, which tive and ethical standards of the field. The phD vn thoughts in a written speech.
and concepts in an in he can publish acco	rding to the highest qualitates the ability to finalize his ov	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates	rding to the highest qualitates the ability to finalize his over course:	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates Brief outline of the c	rding to the highest qualitates the ability to finalize his over course:	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liter	rding to the highest qualitates the ability to finalize his over course:	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liters Course language:	rding to the highest qualitates the ability to finalize his over course:	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liters Course language: Notes: Course assessment	rding to the highest qualitates the ability to finalize his over course:	tive and ethical standards of the field. The phD
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liters Course language: Notes: Course assessment	rding to the highest qualitates the ability to finalize his over course: ature: essed students: 7	tive and ethical standards of the field. The phD vn thoughts in a written speech.
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liters Course language: Notes: Course assessment	rding to the highest qualitates the ability to finalize his over course: ature: essed students: 7 abs	n
and concepts in an in he can publish acco student demonstrates Brief outline of the o Recommended liters Course language: Notes: Course assessment Total number of asse	rding to the highest qualitations the ability to finalize his over course: ature: essed students: 7 abs 100.0	n

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ PVS/15	Course name: Patents, inv	entions, and software
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period: esent	
Number of ECTS cr		
	ster/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Patent filed, invention	e completion: n, software product created.	
	ionstrates the ability to creat interdisciplinary scale or in	e an innovative product in a given scientific field, technical practice
Brief outline of the c	ourse:	
Recommended litera	iture:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 11	
	abs	n
	100.0	0.0
Provides:		
Date of last modifica	tion: 08.11.2022	
Approved: prof. RNI	Dr. Stanislav Krajči, PhD.	

	rik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ POP/22	Course name: Popularisat	ion of science
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pr	rse-load (hours): ly period:	
Number of ECTS cr	redits: 5	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours	1	
Learning outcomes: Demonstrated ability	y to present science to the	lay public, use interactive methods of scientific
Learning outcomes: Demonstrated ability communication, iden professional knowled	y to present science to the ntify the target group and a	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liter	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liters Course language:	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course: ature:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liter: Course language: Notes: Course assessment	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course: ature:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liter: Course language: Notes: Course assessment	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course: ature:	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups wider context of science.
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liter: Course language: Notes: Course assessment	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course: ature: essed students: 15 abs	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups wider context of science. n
Learning outcomes: Demonstrated ability communication, iden professional knowled in the field of his sci Brief outline of the of Recommended liter: Course language: Notes: Course assessment Total number of asse	y to present science to the ntify the target group and ad lge. A PhD student is able to entific work, but also in the course: ature: essed students: 15 abs 100.0	lay public, use interactive methods of scientific dapt the communication language to the level of arouse interest and motivate specific target groups wider context of science. n

	árik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ VYS/22	Course name: Presentati	on of results in a seminar
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 5	
Recommended sem	ester/trimester of the cou	rse:
Course level: III.		
Prerequisities:		
Conditions for cour Presentation at the s	-	
Learning outcomes		
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through	PhD student demonstrates the ability to identify, or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating n Slovak or a foreign language.
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through course:	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through course:	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter Course language:	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through course:	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through course: rature:	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter Course language: Notes: Course assessment	bating in the seminar, the correct scientific methods ility to reflect on a specific critically. Demonstrates cor as well as generating new idequate means and through course: rature:	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter Course language: Notes: Course assessment	essed students: 68	or research methodology in his field of study. He e scientific problem by using the latest approaches npetence in using existing theories and concepts in original scientific knowledge and communicating n Slovak or a foreign language.
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter Course language: Notes: Course assessment	essed students: 68 abs	n
By actively particip evaluate, and apply demonstrates the ab and applying them of an innovative way, research results by a Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	essed students: 68 abs 100.0	n

	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ ZRIG/22	Course name: Principal in	vestigator of an internal grant (VVGS)
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pre	rse-load (hours): ly period:	
Number of ECTS cr	edits: 10	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cours Principal investigator	se completion: r of an internal grant (VVGS	5)
problem within the in their time schedule, the internal VVGS g established procedure	ternal grant system at UPJŠ. measurable outputs and ade grant acquires the ability to e, to be responsible for achie	cess a successful application for his own research Acquires skills with the design of research stages, equate distribution of funds. The very solution of implement the project intention according to the eving the set outputs. As a responsible researcher, management, its administration, and presentation
01 1050115.		
Brief outline of the c	ourse:	
Brief outline of the o		
Brief outline of the o Recommended litera		
Brief outline of the o Recommended litera Course language:	ature:	
Brief outline of the of Recommended litera Course language: Notes: Course assessment	ature:	n
Brief outline of the of Recommended litera Course language: Notes: Course assessment	ature: ssed students: 2	n 0.0
Brief outline of the of Recommended litera Course language: Notes: Course assessment	ature: ssed students: 2 abs	
Brief outline of the of Recommended litera Course language: Notes: Course assessment Total number of asse	ature: ssed students: 2 abs 100.0	

Faculty: Faculty of S	•
C ourse ID: ÚINF/ PAHD/15	Course name: Probabilistic and approximate algorithms
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	re / Practice rse-load (hours): study period: 28 / 14
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 examination.
•	d backgroung in the area of probabilistic and approximation algorithms, with fication, efficiency, and probability of error.
 Las Vegas algorithm Two-sided error M 	wility theory. Basic probabilistic computational models. ms, One-sided error Monte Carlo algorithms. Tonte Carlo algorithms, with bounded and unbounded-error. es with polynomial time.
ISBN 3-540-23949-9 2. MOTWANI, R. and 1995. ISBN 0-521-47 3. MITZEMANCHEI and Probabilistic Ana 4. HROMKOVIČ, J.:	Design and analysis of ranodmized algorithms. Springer-Verlag, 2005. d RAGHAVAN, P.: Randomized Algorithms. Cambridge University Press 7465-5 R, M. and UPFAL, E.: Probability and Computing: Randomized Algorithms alysis. Cambridge University Press 2005. ISBN 0-521-83540 2 Communication Protocols - An Exemplary Study of the Power of adbook on Randomized Computing, P.Pardalos, S.Rajasekaran, J.Reif,

complexity, and programming.

Course assessment Total number of assessed students: 11	
N	Р
0.0	100.0
Provides: prof. RNDr. Viliam Geffert, DrSc., pro	f. RNDr. Gabriel Semanišin, PhD.
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šafa	arik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ Q1SA/22	Course name: Q1 journal	as co-author
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	rse-load (hours): dy period:	
Number of ECTS c	redits: 30	
Recommended sem	ester/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	se completion: l in a journal of category Q1	as co-author.
degree of ability to id He demonstrates the applying them critic an innovative way, a according to the high	lentify, evaluate, and apply c e ability to reflect on a scien ally. He demonstrates the co s well as to generate new on lest qualitative and ethical st	a co-author, the PhD student demonstrates a high orrect scientific methods or research methodology. ntific problem by using the latest approaches and ompetence to use existing theories and concepts in riginal scientific knowledge, which he can publish andards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas.
Brief outline of the	course:	
Recommended liter	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	essed students: 2	
	abs n	
100.0 0.0		
Provides:		
Provides: Date of last modific	ation: 08.11.2022	

	ărik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ Q11A/22	Course name: Q1 journal	as first or corresponding author
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 40	
Recommended sem	ester/trimester of the cours	se:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted		as first or corresponding author.
		ne first or corresponding author, the PhD student
or research methodo the latest approaches theories and concept which he can publis	blogy. He demonstrates the as s and applying them critically is in an innovative way, as we sh according to the highest of strates the ability to critically	by, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demon	blogy. He demonstrates the as and applying them critically is in an innovative way, as we sh according to the highest of strates the ability to criticall deas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own io	blogy. He demonstrates the as and applying them critically is in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own is Brief outline of the	blogy. He demonstrates the as and applying them critically is in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own is Brief outline of the Recommended liter	blogy. He demonstrates the as and applying them critically is in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own is Brief outline of the Recommended liter Course language:	blogy. He demonstrates the as and applying them critically as in an innovative way, as we shaccording to the highest of strates the ability to critically deas. course: rature:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the as and applying them critically as in an innovative way, as we shaccording to the highest of strates the ability to critically deas. course: rature:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the as and applying them critically as in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course: rature: essed students: 0	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the as and applying them critically as in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course: rature: essed students: 0 abs	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own in Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	blogy. He demonstrates the as and applying them critically as in an innovative way, as we sh according to the highest of strates the ability to criticall deas. course: rature: essed students: 0 abs 0.0	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,

Foolty Foolty of		
Faculty: Faculty of S	Science	
Course ID: ÚINF/ Q2SA/22	Course name: Q2 journal	as co-author
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pr	rse-load (hours): ly period:	
Number of ECTS ci	redits: 20	
Recommended seme	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	se completion: in a journal of category Q2	as co-author.
		prrect scientific methods or research methodology. tific problem by using the latest approaches and
applying them critica an innovative way, a according to the high the ability to critical	ally. He demonstrates the constrates well as to generate new ori est qualitative and ethical states and respond to re	mpetence to use existing the fatest approaches and inpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the	ally. He demonstrates the constrates well as to generate new ori est qualitative and ethical states and respond to re course:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter	ally. He demonstrates the constrates well as to generate new ori est qualitative and ethical states and respond to re course:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language:	ally. He demonstrates the constrates well as to generate new ori est qualitative and ethical states and respond to re course:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter	ally. He demonstrates the constrates well as to generate new ori est qualitative and ethical states and respond to re course:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language:	ally. He demonstrates the constrates the constraints well as to generate new oriest qualitative and ethical state and respond to recourse:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language: Notes: Course assessment	ally. He demonstrates the constrates the constraints well as to generate new oriest qualitative and ethical state and respond to recourse:	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language: Notes: Course assessment	ally. He demonstrates the consistence of a second s	mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language: Notes: Course assessment	ally. He demonstrates the consistence of a second s	npetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas
applying them critica an innovative way, a according to the high the ability to critical Brief outline of the o Recommended liter Course language: Notes: Course assessment Total number of asse	ally. He demonstrates the consistent of the set of the	npetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas

Ea aval4 C	ărik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ Q21A/22	Course name: Q2 journal	as first or corresponding author
Course type, scope Course type: Recommended cou Per week: Per stu Course method: p	urse-load (hours): dy period:	
Number of ECTS c	redits: 30	
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	-	as first or corresponding author.
<i>, , , , , , , , , ,</i>	.	e first or corresponding author, the PhD student
or research methodo the latest approaches theories and concept which he can publis	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest of strates the ability to critically	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demon	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas.	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas.	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas.	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas.	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language:	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	bility to reflect on a scientific problem by using . He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest of strates the ability to critically deas. course: rature: essed students: 0	bility to reflect on a scientific problem by using y. He demonstrates the competence to use existing ll as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest of strates the ability to critically deas. course: rature: essed students: 0 abs	hibility to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions, n
or research methodo the latest approaches theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest of strates the ability to critically deas. course: rature: essed students: 0 abs 0.0	hibility to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions, n

Faculty: Faculty of		
racuity. racuity of	Science	
Course ID: ÚINF/ Course name: Q3 journal as co-author Q3SA/22		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 15	
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted	rse completion: d in a journal of category Q3	as co-author
He demonstrates the	e ability to reflect on a scien	brrect scientific methods or research methodology. tific problem by using the latest approaches and
an innovative way, a according to the high	as well as to generate new or nest qualitative and ethical sta	mpetence to use existing theories and concepts in iginal scientific knowledge, which he can publish indards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas
an innovative way, a according to the high	as well as to generate new or nest qualitative and ethical sta ly evaluate and respond to re	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical	as well as to generate new or nest qualitative and ethical sta ly evaluate and respond to re course:	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical Brief outline of the	as well as to generate new or nest qualitative and ethical sta ly evaluate and respond to re course:	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter	as well as to generate new or nest qualitative and ethical sta ly evaluate and respond to re course:	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter Course language:	as well as to generate new ori nest qualitative and ethical sta ly evaluate and respond to re course: rature:	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter Course language: Notes: Course assessment	as well as to generate new ori nest qualitative and ethical sta ly evaluate and respond to re course: rature:	iginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter Course language: Notes: Course assessment	as well as to generate new orthest qualitative and ethical stally evaluate and respond to recourse: rature:	iginal scientific knowledge, which he can publish indards of the field. The PhD student demonstrates eviewers' suggestions, to finalize his own ideas
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter Course language: Notes: Course assessment	as well as to generate new orthest qualitative and ethical stally evaluate and respond to recourse: rature: essed students: 0 abs	n
an innovative way, a according to the high the ability to critical Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	as well as to generate new orthest qualitative and ethical stally evaluate and respond to recourse: rature: essed students: 0 abs 0.0	n

	ärik University in Košice	
Faculty: Faculty of	Science	
Course ID: ÚINF/ Q31A/22	Course name: Q3 journal	as first or corresponding author
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 25	
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted		as first or corresponding author
1 1 1	· · · ·	e first or corresponding author, the PhD student
or research methodo the latest approaches theories and concept which he can publis	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demons	blogy. He demonstrates the a s and applying them critically is in an innovative way, as wel sh according to the highest q strates the ability to critically deas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own io	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own io Brief outline of the	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own is Brief outline of the Recommended liter	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas.	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own in Brief outline of the Recommended liter Course language:	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 2	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own io Brief outline of the Recommended liter Course language: Notes: Course assessment	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 2 abs	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using by the demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions, n
or research methodo the latest approaches theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	blogy. He demonstrates the a s and applying them critically is in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 2 abs 100.0	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using by the demonstrates the competence to use existing as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions, n

- III + CI 510 y + I . J. Dald	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ Q4SA/22	je i		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:		
Number of ECTS cr	edits: 10		
Recommended seme	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cour Publication accepted	se completion: in a journal of category Q4	as co-author.	
degree of ability to id He demonstrates the applying them critica an innovative way, a according to the high	entify, evaluate, and apply co ability to reflect on a scien ally. He demonstrates the con s well as to generate new ori est qualitative and ethical sta	co-author, the PhD student demonstrates a high prrect scientific methods or research methodology. tific problem by using the latest approaches and mpetence to use existing theories and concepts in ginal scientific knowledge, which he can publish ndards of the field. The PhD student demonstrates viewers' suggestions, to finalize his own ideas.	
Brief outline of the o	course:		
Recommended litera	ature:		
Course language:			
Course language: Notes:	· · · · · · · · · · · · · · · · · · ·		
	ssed students: 0		
Notes: Course assessment	ssed students: 0 abs	n	
Notes: Course assessment		n 0.0	
Notes: Course assessment	abs		
Notes: Course assessment Total number of asse	abs 0.0		

Faculty: Faculty of S		
- acuity of a doutry of a	Science	
Course ID: ÚINF/ Q41A/22	Course name: Q4 journal	as first or corresponding author
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 20	
Recommended sem	ester/trimester of the cours	e:
Course level: III.		
Prerequisities:		
Conditions for cour Publication accepted		as first or corresponding author.
demonstrates a high or research methodo	degree of ability to identify blogy. He demonstrates the a	e first or corresponding author, the PhD student y, evaluate, and apply correct scientific methods bility to reflect on a scientific problem by using
theories and concept which he can publis	s in an innovative way, as wel sh according to the highest q strates the ability to critically	A. He demonstrates the competence to use existing l as to generate new original scientific knowledge, qualitative and ethical standards of the field. The average valuate and respond to reviewers' suggestions,
theories and concept which he can publis PhD student demons	s in an innovative way, as well sh according to the highest q strates the ability to critically deas.	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own io	s in an innovative way, as wells haccording to the highest questrates the ability to critically deas.	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language:	s in an innovative way, as wells haccording to the highest questrates the ability to critically deas.	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter	s in an innovative way, as wells haccording to the highest questrates the ability to critically deas.	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language:	s in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language: Notes: Course assessment	s in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature:	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language: Notes: Course assessment	s in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 0	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The v evaluate and respond to reviewers' suggestions,
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the Recommended liter Course language: Notes: Course assessment	s in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 0 abs	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The v evaluate and respond to reviewers' suggestions,
theories and concept which he can publis PhD student demons to finalize his own ic Brief outline of the o Recommended liter Course language: Notes: Course assessment Total number of asse	s in an innovative way, as well sh according to the highest q strates the ability to critically deas. course: rature: essed students: 0 abs 0.0	l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The v evaluate and respond to reviewers' suggestions,

University: P. J. Šafá	irik University in Košice		
Faculty: Faculty of S	Science		
Course ID: ÚINF/ KVAD/15			
Course type, scope a Course type: Lectu Recommended cou Per week: 2 Per stu Course method: pro	re Irse-load (hours): Idy period: 28		
Number of ECTS cr	edits: 8		
Recommended seme	ester/trimester of the course	e:	
Course level: III.			
Prerequisities:			
Conditions for course oral exam	se completion:		
Learning outcomes: To learn how quantu cryptology.		or solving hard problems, in coding theory and in	
search algorithm anf	n. Principles and power of q	quantum computing. Fast factorisation. Qunatum d problems. The class BQNP - an analogy of the hy.	
2. HIRVENSALO, M 3. KITAEV, A.Y., SH American Mathemat 4. NIELSEN, M.A., Cambridge Universit 5. STEEB, W. H., H.	ntum Computing. McGraw-H A. Quantum Computing, Spri- HEN, A.H., VYVALYI, M.N ical Society, 2002. CHUANG, I.L. Quantum Co ty Press, 2000.	inger, 2004. Classical and Quantum Computation. Omputation and Quantum Information. Iutions in Quantum Computing And Quantum	
Course language: Slovak or English			
Notes: Content prerequisitie		pace. Introduction to quantum mechanics.	
Computational comp	nexity.		
Computational comp Course assessment			
Computational comp		р	

Provides: prof. RNDr. Gabriel Semanišin, PhD.

Date of last modification: 23.11.2021

Approved: prof. RNDr. Stanislav Krajči, PhD.

	ărik University in Košice		
Faculty: Faculty of	Science		
Course ID: ÚINF/ RZ/22	Course name: Rewieved international or local proceedings		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: p	urse-load (hours): dy period:		
Number of ECTS c	redits: 5		
Recommended sem	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cour A publication publis	1	gn or national proceedings as an author/co-author.	
	eer-reviewed foreign or nation	nal journal as an author/co-author, the PhD student	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas	hal journal as an author/co-author, the PhD student y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, pualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language:	eer-reviewed foreign or nation a degree of ability to identify ology. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	eer-reviewed foreign or nation a degree of ability to identify ology. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course:	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing II as to generate new original scientific knowledge, qualitative and ethical standards of the field. The	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	eer-reviewed foreign or nation a degree of ability to identify ology. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course: rature: essed students: 78	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment	eer-reviewed foreign or nation a degree of ability to identify ology. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course: rature: essed students: 78 abs	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,	
By publishing in a po- demonstrates a high or research methodo the latest approache theories and concept which he can publis PhD student demon to finalize his own i Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of ass	eer-reviewed foreign or nation a degree of ability to identify blogy. He demonstrates the a s and applying them critically ts in an innovative way, as well sh according to the highest q strates the ability to critically deas course: rature: essed students: 78 abs 100.0	y, evaluate, and apply correct scientific methods ability to reflect on a scientific problem by using y. He demonstrates the competence to use existing Il as to generate new original scientific knowledge, qualitative and ethical standards of the field. The y evaluate and respond to reviewers' suggestions,	

Faculty: Faculty of S	árik University in Košice		
- actuary of a	Science		
Course ID: ÚINF/ SCI/22	Course name: SCI citation		
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	rse-load (hours): dy period:		
Number of ECTS ci	redits: 8		
Recommended sem	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cour Obtained citation reg	se completion: gistered in SCI or Scopus.		
researched field, bas problem in such a w	sed on the ability to formul ay that generates new know	very well-founded scientific knowledge in the ate research questions, to reflect on a scientific ledge. At the same time, a citation in an indexed	
contribution to scien	tific knowledge, at the highe	unicate new knowledge, which is a significant st expert level.	
contribution to scien Brief outline of the	tific knowledge, at the highe		
contribution to scien Brief outline of the Recommended liter	tific knowledge, at the highe		
contribution to scien Brief outline of the	tific knowledge, at the highe		
contribution to scien Brief outline of the Recommended liter	tific knowledge, at the highe		
contribution to scien Brief outline of the Recommended liter Course language:	tific knowledge, at the highe course: ature:		
contribution to scien Brief outline of the Recommended liter Course language: Notes: Course assessment	tific knowledge, at the highe course: ature:		
contribution to scien Brief outline of the Recommended liter Course language: Notes: Course assessment	tific knowledge, at the highe course: ature: essed students: 20	est expert level.	
contribution to scien Brief outline of the Recommended liter Course language: Notes: Course assessment	tific knowledge, at the highe course: ature: essed students: 20 abs	n	
contribution to scien Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	tific knowledge, at the highe course: ature: essed students: 20 abs 100.0	n	

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ VPZ/22	Course name: Scientific work after sending to the editorial office		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:		
Number of ECTS cr	edits: 5		
Recommended seme	ester/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours Scientific work after	se completion: being sent to the editorial of	fice as an author/co-author.	
demonstrates a high or research methodo the latest approaches theories and concepts which he can publish	degree of ability to identify logy. He demonstrates the a and applying them critically in an innovative way, as wel h according to the highest q	fic journal as an author/co-author, the PhD student y, evaluate, and apply correct scientific methods bility to reflect on a scientific problem by using y. He demonstrates the competence to use existing l as to generate new original scientific knowledge, ualitative and ethical standards of the field. The e his own ideas in a structured form.	
Brief outline of the c	course:		
Recommended litera	ature:		
Course language:			
NI-4			
Notes:			
Notes: Course assessment Total number of asse	ssed students: 1		
Course assessment	ssed students: 1 abs	n	
Course assessment		n 0.0	
Course assessment	abs		
Course assessment Total number of asse	abs 100.0		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚINF/ VKDD/15	Course name: Selected topics on numerical analysis and data mining
Course type, scope a Course type: Lectur Recommended cou Per week: 2 Per stu Course method: pre	re rse-load (hours): Idy period: 28
Number of ECTS cr	edits: 8
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
Conditions for cours The ability to formul Project. Oral exam.	Se completion: ate a problem in the acquired terminology and solve it within a project.
to choose a suitable r numerical method an information gain.	the course, the doctoral student, when solving a new type of problem, is able nethod based on the analysis of requirements and principles of the considered d algorithm. The student will master suitable software for data processing and
2. Orthogonalization	f Equations, QR, SVD and eigenfaces
	2, B-splines, Uniform and non-uniform splines es; 2D and 3D splines
5. Parametric Data ap	pproximation and smoothing
 6. Piecewise approxit 7. Chebyshev nodes a 8. Logistic regression 	
e e	methods, Principal components
Recommended litera E. Süli, D.F. Mayers, ISBN 0 521 81026 4	An Introduction to Numerical Analysis, Cambridge University Press, 2003,
2014, 978-1-4398-84	
R.I. Kabacoff, R in A ISBN-13: 978-16172	
J. Andel. Matematick	zá statistika, SNTL/ALFA, 1985

T. Hastie, R. Tibshurani, J.H. Friedman, The Elements of Statistical Learning: Data Mining, Inference, and Prediction, Spinger, 2017, 978-0387848570

O. Jones, R. Maillardet, A. Robinson, Introduction to Scientific Programming and Simulation Using R, Chapman & Hall, 2nd Edition, 2014, 978-1-4665-7001-6

Course language: Slovak or English	
Notes:	
Course assessment Total number of assessed students: 2	
N	Р
0.0 100.0	
Provides: doc. RNDr. Csaba Török, CSc.	
Date of last modification: 23.11.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šafá	rik University in Košic	e	
Faculty: Faculty of S			
Course ID: ÚINF/ SOS1a/15			
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pr	ce rse-load (hours): ıdy period: 28		
Number of ECTS cr	redits: 5		
Recommended seme	ester/trimester of the c	ourse: 1.	
Course level: III.			
Prerequisities:			
	ssing the course is a sur	mmary presentation of the student's results in the field offessional and scientific texts.	
latest knowledge foc		guidance to independent and creative extraction of the o the topic of the student's dissertation and continuous ly acquired knowledge.	
the dissertation,2. Presentation of ne			
Recommended liter Current professional		in the field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 45		
	abs n		
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc.	., doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modification	ation: 21.11.2021		
Approved: prof. RN	Dr. Stanislav Krajči, Ph	D.	

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	science		
Course ID: ÚINF/ SOS1b/15			
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pro-	ce rse-load (hours): Idy period: 28		
Number of ECTS cr	redits: 5		
Recommended seme	ester/trimester of the co	ourse: 2.	
Course level: III.			
Prerequisities:			
_	ssing the course is a sur	nmary presentation of the student's results in the field fessional and scientific texts.	
latest knowledge foc		uidance to independent and creative extraction of the o the topic of the student's dissertation and continuous y acquired knowledge.	
the dissertation,2. Presentation of ne			
Recommended litera Current professional		in the field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 43		
	abs n		
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc.	, doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modific:	ation: 21.11.2021		
Approved: prof. RN			

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S			
Course ID: ÚINF/ SOS2a/15	urse ID: ÚINF/ Course name: Special branch seminar		
Course type, scope a Course type: Practic Recommended cou Per week: 2 Per stu Course method: pre	ce rse-load (hours): dy period: 28		
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cour	se: 3.	
Course level: III.			
Prerequisities:			
	-	ary presentation of the student's results in the field sional and scientific texts.	
latest knowledge foc		ance to independent and creative extraction of the e topic of the student's dissertation and continuous equired knowledge.	
the dissertation, 2. Presentation of new		ific texts focused on issues related to the topic of	
Recommended litera Current professional		he field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 42		
	abs n		
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc., do	oc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modifica	ition: 21.11.2021		
Approved: prof. RNI	Dr. Stanislav Krajči, PhD.		

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ SOS2b/15			
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pre	ce rse-load (hours): Idy period: 28		
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the co	urse: 4.	
Course level: III.			
Prerequisities:			
	ssing the course is a sum	mary presentation of the student's results in the field essional and scientific texts.	
latest knowledge for		idance to independent and creative extraction of the the topic of the student's dissertation and continuous acquired knowledge.	
the dissertation,2. Presentation of new			
Recommended litera Current professional		n the field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 41		
	abs n		
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc.,	doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modifica	ntion: 21.11.2021		
Approved: prof. RN	Dr. Stanialay Vraiži DhD		

University: P. J. Šafá	rik University in Košic	e	
Faculty: Faculty of S	cience		
Course ID: ÚINF/ SOS3a/15			
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pro	ce rse-load (hours): Idy period: 28		
Number of ECTS cr	redits: 5		
Recommended seme	ester/trimester of the c	ourse: 5.	
Course level: III.			
Prerequisities:			
	ssing the course is a sur	nmary presentation of the student's results in the field fessional and scientific texts.	
latest knowledge foc		guidance to independent and creative extraction of the o the topic of the student's dissertation and continuous y acquired knowledge.	
the dissertation,2. Presentation of net			
Recommended litera Current professional		in the field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 41		
	abs n		
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc.	, doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modifica	ation: 21.11.2021		
Approved: prof. RN	Dr. Stanislav Krajči, Ph	D.	

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ SOS3b/15	1		
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	ce rse-load (hours): dy period: 28		
Number of ECTS cr	edits: 5		
Recommended seme	ster/trimester of the cour	se: 6.	
Course level: III.			
Prerequisities:			
	-	ary presentation of the student's results in the field ional and scientific texts.	
latest knowledge focu		ance to independent and creative extraction of the e topic of the student's dissertation and continuous equired knowledge.	
the dissertation, 2. Presentation of new		ific texts focused on issues related to the topic of	
Recommended litera Current professional		he field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 41		
	abs	n	
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc., do	c. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modifica	tion: 21.11.2021		
Approved: prof. RNI	Dr. Stanislav Krajči, PhD.		

University: P. J. Šafá	rik University in Košic	e	
Faculty: Faculty of S			
Course ID: ÚINF/ SOS4a/15			
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pr	ce rse-load (hours): ıdy period: 28		
Number of ECTS cr	redits: 5		
Recommended seme	ester/trimester of the c	ourse: 7.	
Course level: III.			
Prerequisities:			
	ssing the course is a sur	nmary presentation of the student's results in the field fessional and scientific texts.	
latest knowledge foc		guidance to independent and creative extraction of the o the topic of the student's dissertation and continuous y acquired knowledge.	
the dissertation,2. Presentation of ne			
Recommended liter Current professional		in the field of dissertation topic or related field.	
Course language: Slovak or English			
Notes:			
Course assessment Total number of asse	ssed students: 30		
abs n			
	100.0	0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc.	, doc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.	
Date of last modification	ation: 21.11.2021		
Approved: prof. RN	Dr. Stanislav Krajči, Ph	D.	

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ Course name: Special branch seminar SOS4b/15		
Course type, scope a Course type: Practi- Recommended cou Per week: 2 Per stu Course method: pre	ce rse-load (hours): dy period: 28	
Number of ECTS credits: 5		
Recommended seme	ster/trimester of the cou	rse: 8.
Course level: III.		
Prerequisities:		
	ssing the course is a sumn	hary presentation of the student's results in the field ssional and scientific texts.
latest knowledge for		dance to independent and creative extraction of the he topic of the student's dissertation and continuous acquired knowledge.
the dissertation,2. Presentation of new		ntific texts focused on issues related to the topic of
Recommended litera Current professional		the field of dissertation topic or related field.
Course language: Slovak or English		
Notes:		
Course assessment Total number of asse	ssed students: 29	
abs n		
	100.0 0.0	
Provides: prof. RND	r. Viliam Geffert, DrSc., d	oc. RNDr. JUDr. Pavol Sokol, PhD. et PhD.
Date of last modifica	tion: 21.11.2021	
Approved: prof. RN	Dr. Stanialary Knaiži DhD	

Faculty: Faculty of Science

Course ID: Dek. PF	Course name: Spring School for PhD Students
UPJŠ/JSD/14	

Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: Per study period: 4d

Course method: distance, present

Number of ECTS credits: 2

Recommended semester/trimester of the course:

Course level: III.

Prerequisities:

Conditions for course completion:

Active participation in the Spring School of PhD students of UPJŠ.

Learning outcomes:

By actively participating in the Spring School of PhD Students of UPJŠ, the PhD student demonstrates a high level of ability to process the issues of his dissertation for a multidisciplinary audience with an emphasis on clarifying the motivation, scientific problem, processing methodology and own contribution to the solution of the selected topic. The PhD student demonstrates the ability to professionally discuss various research topics, present his own positions and accept a plurality of opinions. Demonstrates the ability to communicate research results to a wider professional audience with adequate means and through the Slovak language.

Brief outline of the course:

1. Interdisciplinary lectures from the fields of medicine, natural sciences, law, public affairs, humanities. Lecturers - top foreign or national experts from the mentioned fields.

2. Scientific lectures in sections created within related disciplines. Lecturers - top experts from UPJŠ from the mentioned fields.

3. Scientific contributions of PhD students in sections of related fields.

4. Panel discussions on the issue of PhD studies and current trends in the development of scientific disciplines at UPJŠ.

Recommended literature:

Proceedings of the Spring School of Doctoral Students.

Course language:

Notes:

Course assessment

Total number of assessed students: 203

abs	
100.0	

Provides: doc. RNDr. Marián Kireš, PhD.

n0.0 Date of last modification: 08.11.2022

Approved: prof. RNDr. Stanislav Krajči, PhD.

E	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: ÚINF/ Course name: Supervision of a students scientific work VPSV/22		
Course type, scope a Course type: Recommended cou Per week: Per stud Course method: pro	rse-load (hours): ly period:	
Number of ECTS cr	edits: 8	
Recommended seme	ster/trimester of the cour	se:
Course level: III.		
Prerequisities:		
Conditions for cours Supervision of Stude	se completion: nt's Scientific Activity	
By guiding a stude	nt within the SOČ or ŠV	VOČ, the PhD student demonstrates broad and
scientifically based k and approaches. Dem solution, as well as to skills from the field o	nowledge in the field of stud constrates the ability to critic evaluate it and possibly pr of pedagogical sciences to h	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field o Brief outline of the c	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field o	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field o Brief outline of the c	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field of Brief outline of the o Recommended litera	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field of Brief outline of the o Recommended litera Course language:	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course: ature:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field of Brief outline of the o Recommended litera Course language: Notes: Course assessment	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course: ature:	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and
scientifically based k and approaches. Dem solution, as well as to skills from the field of Brief outline of the o Recommended litera Course language: Notes: Course assessment	nowledge in the field of stud constrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course: ature: ssed students: 11	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and is own field.
scientifically based k and approaches. Dem solution, as well as to skills from the field of Brief outline of the o Recommended litera Course language: Notes: Course assessment	nowledge in the field of stud ionstrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course: ature: ssed students: 11 abs	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and is own field.
scientifically based ki and approaches. Dem solution, as well as to skills from the field of Brief outline of the of Recommended litera Course language: Notes: Course assessment Total number of asse	nowledge in the field of stud ionstrates the ability to critic o evaluate it and possibly pr of pedagogical sciences to h course: ature: ssed students: 11 abs 100.0	y, as well as knowledge of a wide range of methods ally assess a professional problem and its proposed opose another solution. He applies knowledge and is own field.

E	ărik University in Koši	
Faculty: Faculty of	Science	
Course ID: ÚINF/ PPC1/22Course name: Teaching activities 1 h/s		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 2	
Recommended sem	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cour Direct teaching activ	-	
Learning outcomes		ident demonstrates the ability to transfer and integrate
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and	al activity, the PhD stu is own field of study d strategies of study gu He is capable of design current trends in higher digital competencies.	ident demonstrates the ability to transfer and integrate into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies.	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies.	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies.	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter Course language:	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies. course: rature:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies. course: rature:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies. course: rature: essed students: 4	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study gr He is capable of design current trends in higher digital competencies. course: rature: essed students: 4 abs	n
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	al activity, the PhD stu is own field of study gr d strategies of study gr He is capable of design current trends in higher digital competencies. course: rature: essed students: 4 abs 100.0	n

	árik University in Koši	
Faculty: Faculty of	Science	
Course ID: ÚINF/Course name: Teaching activities 2 h/sPC2/22		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 4	
Recommended sem	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cour Direct teaching activ	rse completion: vity 2 semester hours	
Learning outcomes		adapt demonstrates the shility to transfer and intermeter
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and	al activity, the PhD stu s own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	indent demonstrates the ability to transfer and integrate into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter Course language:	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 12	into education. He is able to select and apply the roup management, higher education and evaluation of ning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 12 abs	n
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 12 abs 100.0	n

Eagultry Eggster - f	árik University in Koši	
Faculty: Faculty of	Science	
Course ID: ÚINF/ PC3/22Course name: Teaching activities 3 h/s		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 6	
Recommended sem	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cour Direct teaching activ	rse completion: vity 3 semester hours	
Learning outcomes		ident demonstrates the shility to transfer and interests
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and	al activity, the PhD stu s own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	udent demonstrates the ability to transfer and integrate r into education. He is able to select and apply the group management, higher education and evaluation of gning and implementing part of the educational process or education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of pring and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of pring and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter Course language:	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of pring and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	roup management, higher education and evaluation of pring and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	roup management, higher education and evaluation of pring and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	r into education. He is able to select and apply the proup management, higher education and evaluation of gning and implementing part of the educational process or education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with o communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 1 abs	n into education. He is able to select and apply the proup management, higher education and evaluation of pring and implementing part of the educational process or education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 1 abs 100.0	n into education. He is able to select and apply the proup management, higher education and evaluation of pring and implementing part of the educational process or education and the requirements placed on the level of

Easultan Esselta	ärik University in Koš	
Faculty: Faculty of	Science	
Course ID: ÚINF/ PC4/22Course name: Teaching activities 4 h/s		
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pi	ırse-load (hours): dy period:	
Number of ECTS c	redits: 8	
Recommended sem	ester/trimester of the	course:
Course level: III.		
Prerequisities:		
Conditions for cour Direct teaching activ	rse completion: vity 4 semester hours	
Learning outcomes		ident demonstrates the ability to transfer and integrate
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	udent demonstrates the ability to transfer and integrate into education. He is able to select and apply the roup management, higher education and evaluation of ming and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter Course language:	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies.	roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with communication and Brief outline of the Recommended liter	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature:	roup management, higher education and evaluation of ning and implementing part of the educational process
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 14	r into education. He is able to select and apply the roup management, higher education and evaluation of ming and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 14 abs	n into education. He is able to select and apply the roup management, higher education and evaluation of aning and implementing part of the educational process r education and the requirements placed on the level of
Through pedagogica knowledge from hi right techniques and learning outcomes. in accordance with a communication and Brief outline of the Recommended liter Course language: Notes: Course assessment Total number of asse	al activity, the PhD stu is own field of study d strategies of study g He is capable of desig current trends in highe digital competencies. course: rature: essed students: 14 abs 100.0	n into education. He is able to select and apply the roup management, higher education and evaluation of aning and implementing part of the educational process r education and the requirements placed on the level of

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚINF/ TNSD/15	Course name: Theoretical aspects of neural networks
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	e ·se-load (hours): dy period: 28
Number of ECTS cro	edits: 9
Recommended seme	ster/trimester of the course:
Course level: III.	
Prerequisities:	
	e completion: lual work in the study of theoretical issues of neural networks - advanced tworks. Oral examination based on selected type of neural network.
	natical principles of neural networks and to know their capabilities. To be able f neural networks to solve some problems.
46. Probabilistic new 79. Computational of machines, and Turing 1012. Approximation	complexity of neural networks.
2016. ISBN: 9780262 2. HERTZ, John, And computation. Redwoo complexity. ISBN 0-2 3. KVASNIČKA, Vla ISBN 80-88778-30-1 4. ŠÍMA, Jiří a Roma 1996. ISBN 80-85865 5. HASSOUN, M. H.	an, BENGIO Yoshua a Aaron COURVILLE. Deep Learning. MIT Press, 2035613. lers KROGH a Richard G. PALMER. Introduction to the theory of neural od City: CRC Press, [1991]. Santa Fe Institute studies in the sciences of 201-51560-1. ddimír. Úvod do teórie neurónových sietí. [Slovenská republika]: IRIS, 1997. n NERUDA. Teoretické otázky neuronových sítí. Praha: MATFYZPRESS,
Course language: Slovak or English	
Notes:	

Course assessment	
Total number of assessed students: 30	
Ν	Р
0.0	100.0
Provides: doc. RNDr. Ľubomír Antoni, PhD., do	c. RNDr. Gabriela Andrejková, CSc.
Date of last modification: 20.09.2021	
Approved: prof. RNDr. Stanislav Krajči, PhD.	

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
Course ID: ÚINF/ KZPR/22			
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	rse-load (hours): y period:		
Number of ECTS credits: 4			
Recommended seme	ster/trimester of the cours	e:	
Course level: III.			
Prerequisities:			
Conditions for cours Final thesis consultar	-		
knowledge in the fiel Demonstrates the abi well as to evaluate it the field of pedagogid	d of study, as well as knowl lity to critically assess a pr and possibly propose anoth cal sciences to his own field	nt demonstrates broad and scientifically based edge of a wide range of methods and approaches. ofessional problem and its proposed solution, as er solution. He applies knowledge and skills from	
Brief outline of the course:			
Recommended litera	iture:		
Course language:			
Notes: Course assessment Total number of asses	ssed students: 7		
abs n			
100.0 0.0			
Provides:			
Date of last modifica	tion: 08.11.2022		

University: P. J. Šafa	árik University in Košice	
Faculty: Faculty of S	Science	
Course ID: ÚINF/ VZP/22	Course name: Thesis supervising	
Course type, scope a Course type: Recommended cou Per week: Per stue Course method: pr	ırse-load (hours): dy period:	
Number of ECTS c	redits: 8	
Recommended sem	ester/trimester of the cour	§e:
Course level: III.		
Prerequisities:		
Conditions for cour Supervisor of the fin	-	
knowledge in the fie Demonstrates the ab well as to evaluate it the field of pedagog	eld of study, as well as know bility to critically assess a p t and possibly propose anoth ical sciences to his own field	ent demonstrates broad and scientifically based ledge of a wide range of methods and approaches. rofessional problem and its proposed solution, as er solution. He applies knowledge and skills from d.
Brief outline of the		
Recommended liter	ature:	
Course language:	_	
Notes:		
Course assessment Total number of asse	essed students: 16	
	abs	n
	100.0	0.0
Provides:		
Provides: Date of last modific	ation: 08.11.2022	