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University: P. J. S	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science				
<b>Course ID:</b> ÚBE AFV/15	V/ Course na	me: Activating	forms of biology	teaching	
Course type, scop Course type: Pr Recommended Per week: 2 Per Course method:	pe and the met actice course-load (h study period: present	hod: ours): 28			
Number of ECTS	S credits: 2				
Recommended so	emester/trimes	ter of the cours	<b>e:</b> 3.		
Course level: II.					
Prerequisities: Ú	BEV/DIB1/03				
<b>Conditions for co</b> Colloquium - pre	ourse completi sentation of ser	<b>on:</b> ninar work.			
Learning outcom Extension of peda projects solved a training of innova	nes: agogical skills w at the Departme ative activities.	vith new teaching ent of Biology I	methods resultin Didactics. Involv	g from education rement in project	al and scientific ts and practical
Brief outline of the Teacher and stude based science edu educational technology. Project no work.	he course: ent - partners in ucation). New a nologies suppor nanagement and	learning. The dev pproaches to for tting IBSE. Diff l cooperative me	velopment of scie mative and summer erent ways of w thods for biology	ence skills throug native assessmen orking with text lessons. Presenta	h IBSE (Inquiry at in IBSE. New when learning ation of seminar
Recommended literature: Kimáková, K.: Úvod do štúdia didaktiky biológie, elektronický študijný text, 2008 Kireš, M. [et al.] .Bádateľské aktivity v prírodovednom vzdelávaní [Inquiry activities in science education] časť A 1. vyd Bratislava : Štátny pedagogický ústav, 2016 128 s Projekt: Establish 244749 ; Sails 2890085 ISBN 9788081181559 Standards and biology textbooks for Slovak lower and upper secondary schools (ISCED 2, ISCED 3) Study materials of the internal course published in Moodle https://lms.upjs.sk/login/index.php					
Course language	:				
Notes:					
Course assessme Total number of a	nt assessed studen	ts: 28			
Α	В	С	D	Е	FX
60.71	21.43	17.86	0.0	0.0	0.0
Provides: PaedDr	r. Andrea Leško	ová, PhD., Mgr. Z	Zuzana Boberová	i, PhD.	

Date of last modification: 16.12.2021

University I. J. Salarik University in Kusice	University:	P. J.	Šafárik	University	in Košice
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Faculty: Faculty of Science

Course ID: ÚINF/	Course name: Administration of OS
AOS1/15	

Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28

Course method: present

Number of ECTS credits: 2

**Recommended semester/trimester of the course:** 1., 3.

Course level: I., II., N

**Prerequisities:** 

#### **Conditions for course completion:**

The condition for passing the course is successful realization of a project focused on the network services configuration.

#### Learning outcomes:

The result of the education is an understanding of the theoretical and practical background of Windows and Linux operating systems and selected network services.

#### **Brief outline of the course:**

1. Management of Linux operating system (basic system tools for troubleshooting, system startup, network configuration), 2. File systems (general view), 3. File systems (RAID, LVM), 4. Web hosting services I. (basic concept, APACHE), 5. Web hosting services II. (SQL, HTTPS, security, NGINX), 6. File services I. (SAMBA, NFS), 7. File services II. (FTP), 8. Management of local computer network I. (routing, DHCP), 9. Management of local computer network II. (firewall), 10. VPN, 11. SSH and Proxy, 12. Kernel of the Linux operating system, 13. Administration of the Windows operating system.

#### **Recommended literature:**

1. LPIC-1 Exam 102. LPI [online]. Canada: The Linux Professional Institute, 2021 [cit. 2021-9-22]. Dostupné z: https://learning.lpi.org/en/learning-materials/102-500/, 2. Linux - Dokumentační projekt [online]. 4. Praha: Computer Press, 2007 [cit. 2021-9-22]. Dostupné z: https://i.iinfo.cz/files/root/k/LDP\_4.pdf, 3. The LPIC2 Exam Prep [online]. Sue B.V. - Open Sourced, 2021 [cit. 2021-9-26]. Dostupné z: https://lpic2book.github.io/src/

### **Course language:**

Slovak or English

#### Notes:

Content prerequisites: understanding of fundamental concepts of operating systems, computer networks, basic skill in Linux shell (e.g. bash) and Powershell.

Course assessm Total number o	nent f assessed studen	ts: 36				
А	В	С	D	Е	FX	
58.33	22.22 11.11 0.0 8.33 0.0					
Provides: doc. RNDr. JUDr. Pavol Sokol, PhD., RNDr. Tomáš Bajtoš						
Date of last modification: 26.09.2021						
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.						

	n.					
University: P. J	. Šafárik U	Univers	sity in Košice			
Faculty: Facult	y of Scien	ice				
Course ID: ÚB BDB/22	EV/ Co	urse na	ame: Biology and	d Didactics of Bi	ology	
Course type, so Course type: Recommended Per week: Per Course metho	cope and t d course-l r study po d: presen	the me load (h eriod: t	thod: nours):			
Number of EC	TS credit	s: 2				
Recommended	semester	/trime	ster of the cours	e:	_	
Course level: II	[					
Prerequisities:	ÚBEV/V	EK1/03	3 and (ÚBEV/VN	/K/22 or ÚBEV/	MKVU/15) and	ÚBEV/DIB1/03
Conditions for State exams in t The student has context. Each to the content at th	course co the subjec to demoni opic is ass ne seconda	<b>omplet</b> i t of bio strate p igned a ary (sec	ion: ology and didaction rofessional know a didactic problem condary) or prima	es of biology are ledge of the draw n, which is to exp ary (primary) sch	held in the form on topic and prese plain and apply to ool level (marke	of an oral exam. ent it in a broader o the teaching of d).
Learning outco Graduates will	omes: gain the a	bility to	o teach biology a	t lower and uppe	r secondary educ	cation.
Brief outline of Wider context of Didactic element content at the lef Strategies and t	the cour of general nts of teac evel of pri rends in to	se: ecolog hing bi mary a eaching	y and biology of ology and their a nd secondary sch g biology and exa	multicellular org pplication to spector lool. Imples of their ap	anisms and micr cific didactic proloplication in scho	oorganisms. blems and given ool practice.
Recommended Current school Other sources a a state exam.	<b>literatur</b> document re listed in	e: s in the n the re	e Slovak Republic ecommended liter	c. rature of profile s	subjects, which a	re followed by
<b>Course langua</b> SK	ge:					
Notes:						
Course assessm Total number o	nent f assessed	studen	nts: 24			
А	В		C	D	Е	FX
33.33	37.	5	20.83	8.33	0.0	0.0
Provides:	·					
Date of last mo	dification	<b>n:</b> 13.05	5.2022			

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> KPPaPZ/SNP/09	Course name: Bullying, Violence and Their Prevention
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pro	and the method: ce rse-load (hours): ady period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ester/trimester of the course: 1., 3.
Course level: II.	
Prerequisities:	
Active participation Active participation Seminar work - 40% Seminar work 2 - 40	in seminars. Detailed information will be given. - 20%
Learning outcomes: The student will acc about solving proble of prevention. With implementation of pr and their willingness	uire the latest information about bullying in schools and its consequences, ematic situations associated with bullying as well as about possible ways in the seminars, students will develop professional skills through the revention activities. At the same time, their sensitivity to the issue of bullying to actively address it during their pedagogical practice will increase.
Brief outline of the of Aggressive behavior environment). Manif role of teacher, school level of school, class activities used in the	course: . Characteristics of actors of bullying (personality, characteristics of family estations and possible causes of bullying. Bullying as a group process. The ol and parent in solving bullying. Possibilities of prevention of bullying at the , individuals. Primary, secondary and tertiary prevention. Socio-psychological prevention of bullying.
Recommended litera Kolář, M.: Bolest šik 2001 Jánošová a kol. Psyc Říčan, P.: Agresivita	ature: anování. Cesta k zastavení epidemie šikanování ve školách. Portál, Praha, hologie školní šikany. Grada, Praha, 2016 a šikana mezi dětmi. Portál, Praha, 1995

Course language:

Notes:

Course assessm Total number o	nent f assessed studen	ts: 214				
А	В	С	D	Е	FX	
85.51	13.08 0.93 0.47 0.0 0.0					
Provides: doc. Mgr. Mária Bačíková, PhD.						
Date of last modification: 24.06.2022						
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.						

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP SDaM/15	O/ Course na	ame: Child and A	dolescent Socio	logy	
Course type, so Course type: 1 Recommended Per week: 2 P Course metho	cope and the me Lecture d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	TS credits: 2				
Recommended	semester/trimes	ster of the cours	e: 3.		
Course level: II	[.				
Prerequisities:					
Conditions for	course completi	ion:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number o	nent f assessed studen	ıts: 968			
А	В	С	D	E	FX
50.21	29.13	14.98	3.62	1.55	0.52
Provides: doc. Mgr. Alexander Onufrák, PhD.					
Date of last mo	dification: 29.06	5.2022			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Or , CSc.	osová, CSc., prof	. RNDr. Stanisla	w Krajči, PhD., p	rof. RNDr.

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP MT/09	E/ Course na	ame: Class Mana	gement		
Course type, so Course type: Recommended Per week: 2 P Course metho	eope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	<b>IS credits:</b> 2				
Recommended	semester/trimes	ster of the cours	<b>e:</b> 2.		
Course level: I					
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
<b>Course assessn</b> Total number o	nent f assessed studen	ts: 572			
А	В	С	D	E	FX
53.85	34.79	8.39	1.57	0.52	0.87
Provides: doc. ]	Provides: doc. PaedDr. Renáta Orosová, PhD.				
Date of last mo	dification: 12.03	3.2024			
Approved: prot Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prof	E. RNDr. Stanisla	w Krajči, PhD., p	rof. RNDr.

University: P. J. Šafárik University in Košice							
Faculty: Faculty of S	Science						
<b>Course ID:</b> ÚINF/ KKV1/21	JINF/ <b>Course name:</b> Classical and quantum computations						
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present							
Number of ECTS credits: 6							
Recommended semester/trimester of the course: 1., 3.							
Course level: II., N							
Prerequisities:							
Conditions for cours	Conditions for course completion.						

Successful completion of the subject is conditioned by proper acquisition of basic concepts, algorithms and models and demonstrating the ability to apply them creatively. The acquisition of knowledge takes place:

- continuously during the semester in the form of partial assignments,
- a written test during the semester,
- a written test at the exam,
- oral exam.

In order to receive an evaluation, it is necessary to obtain at least 50% of points from each of the three parts (assignments during the semester, written part of the exam, oral part of the exam). The detailed evaluation method is published in the AIS.

### Learning outcomes:

By completing the subject, the student will get:

- knowledge of the classification and design of probabilistic algorithms,

- basic knowledge of the principles of quantum computers and their differences compared to classical computing models,

- knowledge and skills about the design and functioning of quantum computing and become familiar with the most well-known algorithms,

= basic quantum computer programming skills.

### Brief outline of the course:

1. Introduction to quantum quantum computers. Basics of classical complexity theory.

- 2. Boolean circuits and their basic properties.
- 3. Probability algorithms.
- 4. BPP class and probability testing.
- 5. Basic properties of circuits and Fermat's test.
- 6. Miller Rabin's test and the position of the BPP class in the hierarchy of complexity models.
- 7. Introduction to quantum computing and mathematical foundations of quantum theory.
- 8. Spectral representation of self-adjoint operators.
- 9. Quantum states and Hilbert vector spaces.
- 10. Basic quantum operators and basic quantum algorithms.

- 11. Quantum teleportation, superdense coding and Grover's algorithm.
- 12. Fourier transformation.
- 13. Shor's algorithm.

### **Recommended literature:**

1. BERMAN,G.P., DOOLEN,G.D., MAINIERI, R., TSIFRINOVIC, V.I. Introduction to Quantum Computers. World Scientific, 2003.

2. GRUSKA, J. Quantum Computing. McGraw-Hill, 1999.

3. JOHNSON, G. A Shortcut Through Time: The Path to the Quantum Computer, Knopf 2003.

4. KITAEV, A.Y., SHEN, A.H., VYALYI, M.N. Classical and Quantum Computation. American Mathematical Society, 2002.

5. NIELSEN, M.A., CHUANG, I.L. Quantum Computation and Quantum Information.

Cambridge University Press, 2000.

6. HIRVENSALO, M., Quantum Computing, Springer 2004

### **Course language:**

Slovak or english

### Notes:

Content prerequisites:

Linear algebra, Group theory, Probability theory, Theory of algorithms, Introduction to quantum computers.

### **Course assessment**

Total number of assessed students: 93

А	В	С	D	Е	FX
27.96	38.71	16.13	5.38	4.3	7.53

Provides: prof. RNDr. Gabriel Semanišin, PhD., Mgr. Viktor Olejár

**Date of last modification:** 25.07.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ TVY/15	Course name: Computability theory
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of ECTS cr	edits: 4
Recommended seme	ster/trimester of the course: 1.
Course level: I., II.	
Prerequisities:	
<b>Conditions for cours</b> Two written examina (primitive) recursive classes of recursive a	e completion: tions focused on the construction of Turing machines, creating sequences of functions, solving examples. Oral exam focused on the relationship between nd computable functions, the problem of stopping a Turing machine.
Learning outcomes: Knowledge of compu between Turing comp	tational model of Turing machine, Goedelian arithmetization, and relationship butability and recursivity of functions.
<b>Brief outline of the c</b> 1. Turing machine, ba 2. Shifting of states, of 3. Modifications of ca 4. Elementary Turing 5. Compositions of el 6. Primitively recursi 7. Primitively recursi 8. Functions and prec 9. Goedelian arithme 10. Recursive function 11. Relationship of rec 12. Halting problem	ourse: asic principles of work of Turing machine, formalization of basic notions compositions of machines, computations on composed machines onfiguration machines ementary Turing machines ve functions ve predicates licates from number theory tizationa of Turing computability excursivity and Turing computability
Recommended litera 1. BRIDGES, Dougla ISBN:: 978-0387941 2. BUKOVSKÝ, Lew 3. MACHTEY, Mich NorthHolland, Ams 4. KRAJČI, Stanislav ucebneTexty/vypocita	<ul> <li>ture:</li> <li>as. Computability, A Mathematical Sketch book. SpringerVerlag, 1994.</li> <li>745</li> <li>745</li> <li>746 Teória algoritmov, ES UPJŠ, Košice, 1999. ISBN 8070973730</li> <li>ael a Paul YOUNG. An Introduction to the General Theory of Algorithms, aterdam 1978.</li> <li>7. Teória vypočítateľnosti. http://ics.upjs.sk/~krajci/skola/vyucba/atelnost.pdf</li> </ul>
Course language:	

Slovak					
Notes:					
<b>Course assessm</b> Total number o	nent f assessed studen	ts: 315			
А	В	С	D	Е	FX
51.75	11.11	11.43	5.08	5.4	15.24
Provides: doc. RNDr. Ľubomír Antoni, PhD.					
Date of last mo	dification: 04.01	.2022			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prof	E RNDr. Stanisla	v Krajči, PhD., j	prof. RNDr.

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚINF/ VKN2/22	Course name: Computational and cognitive neuroscience II
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course: 1., 3.
Course level: II., N	
Prerequisities:	
<b>Conditions for cours</b> Midterm exam Final exam consisting	e completion: g of written and/or oral part
Learning outcomes: Advanced topics in neuroscience.	computational and cognitive neuroscience, and in the tools used in
Brief outline of the c 1. Intro: Cognitive ps Theme 1: Topics in c 2. Neural basis of vis 3. Visual object recog 4. Auditory cognition 5. Cortical sound pro 6. Other topics in the Topic 2: Modeling in 7. Intro 8. Connectionism, ST 9. Additive and shunt 10. Learning rule Ou 11. Adaptive resonan 12. Statistical and dea Topic 3: Current rese 13. Invited lecture	ourse: ychology, neural modeling. ognitive and neural science ion gnition and visual scene analysis 1. Echo suppression. Auditory scene analysis cessing. study of brain and main: thinking, consciousness, emotions, motivation cognitive and neural science I'M and LTM modeling ting neural networks. tstar. ce theory. cision-theory modeling arch at UPJS
Recommended litera 1. KANDEL, E. R., S McGraw-Hill, 2021 I 2. Dayan P and LF A Modeling of Neural S 3. Thagard P: Mind: 978-0262701099	<b>ture:</b> SCHWARTZ, J. H. and JESSELL, T.M.: Principles of Neural Science. SBN-13: 978-1259642234 bbott: Theoretical Neuroscience - Computational and Mathematical Systems. MIT Press, 2005 ISBN-13: 978-0262541855 Introduction to Cognitive Science, 2nd Edition. Bradford Books. ISBN-13 :

978-0262701099

# 4. HERTZ, J., KROGH, A. and PALMER R. G.: Introduction to the theory of neural computation. Addison-Wesley 1991 ISBN-13: 978-0201515602

### **Course language:**

Slovak or English

### Notes:

Content prerequisites:

basics of neurobiology, cognitive psychology, linear algebra and differential equations, programing, or instructor's consent

#### **Course assessment**

Total number of assessed students: 9

А	В	С	D	Е	FX
33.33	11.11	11.11	11.11	33.33	0.0

Provides: doc. Ing. Norbert Kopčo, PhD., RNDr. Keerthi Kumar Doreswamy

**Date of last modification:** 14.02.2022

	COURSE INFORMATION LETTER
University: P. J. Šafá:	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ VYZ1/15	Course name: Computational complexity
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: e rse-load (hours): dy period: 28 esent
Number of ECTS cr	edits: 4
Recommended seme	ster/trimester of the course: 3.
Course level: II., N	
Prerequisities:	
<b>Conditions for cours</b> Oral examination.	e completion:
<b>Learning outcomes:</b> To give students the completeness.	neoretical background in computational complexity and theory of NP-
Brief outline of the c 1: Introduction: the nor- example - the problem 2: Basic computation these computers, sing of these computation complexity 3: The classes P and – the set of all 3-colo – the set of satisfiable normal form 4: Variants of P and N polynomial conversion 5: NP-completeness: completeness and its 6: NP-completeness of	ourse: otion of computational complexity, computational time, computational model, n of sorting, computational complexity as an asymptotic function nal models: RAM and RASP computers, the cost of an elementary step on le-tape Turing machine, multi-tape Turing machine, nondeterministic variants nal models, transformations among these models with respect to the time NP: basic definitions, presenting (un)undirected graphs on the input, 3COL orable graphs is in NP, 2COL - the set of all 2-colorable graphs is in P, SAT e Boolean formulas is in NP, CNF-SAT - Boolean formulas in conjunctive P: decision problem, the problem of finding a solution, optimization problem, ons among different variants reducibility in polynomial time and its transitivity, definition of the NP- basic properties of SAT
7: Variants of SAT: 3 kCNF-SAT, CNF-SA	CNF-SAT - satisfiability of Boolean formulas in 3-conjunctive normal form, T - satisfiability in k-conjunctive (conjunctive) normal form, 2CNF-SAT is

in P

8: 3COL and its variants: 3COL (the problem of coloring vertices of a graph with 3 colors) in NP-complete, consequently: for each k>3, kCOL (the problem of coloring with k colors) is NPcomplete as well

9: Colorability of a planar graph with three colors: presenting a planar graph on the input, the proof of NP-completeness, coloring with a larger number of colors

10: Another NP-complete problems: Exact set cover, Clique, Vertex cover

11: Hamiltonian path: Hamiltonian path in a directed and in undirected graph

12: Subset-sum-like problems: Subset Sum - the problem of whether any subset of the integers sum to precisely a target sum, Partition - the problem of whether a given multiset of positive integers can be partitioned into two subsets with equal sums, a "more relaxed" version of Partition - achieving an approximate equality of the sums, distribution of tasks among K parallel processors

13: Beyond P a NP: a review of the basic complexity classes - L, NL, P, NP, PSpace, NPSpace, ExpTime, NExpTime, ..., simulation of (non)deterministic space in (non)deterministic time, conversions in opposite directions

14: PSpace: QBF - true quantified Boolean formulas, prenex normal form, Pspace completeness of QBF, PSpace = NPSpace

### **Recommended literature:**

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

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

3. L.A.Hemaspaandra, M.Ogihara: Complexity theory companion, EATCS series, texts in computer science, Springer-Verlag, 2002.

4. S. Arora, B. Barak: Computational Complexity: A Modern Approach, Cambridge Univ. Pess, 2009. 5. G.Brassard, P.Bradley: Fundamentals of algorithmics, Prentice Hall, 1996.

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

7. 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.

### **Course language:**

Slovak or english

### Notes:

Content prerequisities:

Basic notions from the theory of automata and formal languages.

Basic skills in programming and design of algorithms (in any programming language). Basics knowledge in mathematical logic, set theory, and graph theory.

### **Course assessment**

Total number of assessed students: 380

А	В	С	D	Е	FX
57.11	15.79	13.16	6.84	6.84	0.26

Provides: prof. RNDr. Viliam Geffert, DrSc.

**Date of last modification:** 23.11.2021

University: P. J	. Šafárik Univer	sity in Košice				
Faculty: Facult	y of Science					
Course ID: ÚI MSSUI/22	NF/ Course n	Course name: Computer science and didactics of informatics				
Course type, so Course type: Recommended Per week: Per Course metho	cope and the mo d course-load ( r study period: d: present	ethod: hours):				
Number of EC	TS credits: 2					
Recommended	semester/trime	ester of the cours	e:			
Course level: II	[					
<b>Prerequisities:</b> ÚINF/UNS1/15	<b>Prerequisities:</b> ÚINF/DIN1b/15 and ÚINF/TIK1/22 and (ÚINF/UGR1/15 or ÚINF/KKV1/21 or ÚINF/UNS1/15 or ÚINF/FO1/15)					
Conditions for	course complet	tion:				
Learning outcomes:						
Brief outline of the course:						
Recommended literature:						
Course language:						
Notes:	Notes:					
Course assessm Total number o	nent f assessed stude	nts: 2				
А	В	C	D	Е	FX	
50.0	0.0	0.0	0.0	50.0	0.0	
Provides:						
Date of last mo	Date of last modification: 08.02.2022					
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga O , CSc.	rosová, CSc., prof	E. RNDr. Stanisl	av Krajči, PhD., p	orof. RNDr.	

University: P. J.	Šafárik Univer	sity in Košice				
Faculty: Faculty	of Science					
<b>Course ID:</b> ÚBI OPR/12	EV/ Course name: Conservation Biology					
Course type, sc Course type: L Recommended Per week: 2 / 0 Course method	ope and the mo Lecture / Practic l course-load (l ) Per study per d: present	ethod: e hours): iod: 28 / 0				
Number of EC	<b>FS credits:</b> 3					
Recommended	semester/trime	ester of the cours	<b>e:</b> 1.			
Course level: I.,	II.					
Prerequisities:						
<b>Conditions for</b> Mandatory part examination.	course complet icipation in le	tion: ctures, completic	on of two seme	stral written exa	minations, oral	
<b>Learning outcomes:</b> The main goal of the subject is to introduce term biodiversity, principal threats and conservation of species, populations, communities and ecosystems.						
Brief outline of Fundamental ar hotspots on Eart Factors leading to of populations a of protected are to conservation	the course: and origin of co h. Economic va to biodiversity t and species, con as, conservation of nature.	nservation biolog lue of biodiversity hreats. Extinction servation program n outside the prot	gy. Different lev as the principal s and problems o ns and strategies tected areas. Sus	vels of biodiversi argument of natu f small population c. Classification a stainable develop	ity, biodiversity re conservation. ns. Conservation nd management ment, education	
<b>Recommended literature:</b> Primack R.B., 2010: Essentials of conservation biology. Sinauer Associates, 1-603						
Course languag	ge:					
Notes:						
Course assessment Total number of assessed students: 800						
А	В	C	D	E	FX	
73.63	16.0	6.5	2.75	0.5	0.63	
<b>Provides:</b> prof.	RNDr. Ľubomín	Kováč, CSc.				
Date of last mo	dification: 14.1	2.2021				
Approved: prof Ľubomír Kováč,	. PhDr. Ol'ga O CSc.	rosová, CSc., prot	f. RNDr. Stanisla	av Krajči, PhD., p	orof. RNDr.	

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚBEV/ MPPc/15	Course name: Continuous practice teaching I				
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	nd the method: ce rse-load (hours): y period: 4t esent				
Number of ECTS cr	edits: 2				
Recommended seme	ster/trimester of the cours	<b>::</b> 3.			
Course level: II.					
Prerequisities: ÚBEV	V/MPPb/15				
Conditions for cours	e completion:				
Learning outcomes:	Learning outcomes:				
Brief outline of the c	Brief outline of the course:				
Recommended litera	iture:				
Course language:					
Notes:					
<b>Course assessment</b> Total number of asses	ssed students: 301				
	abs n				
100.0 0.0					
Provides:					
Date of last modifica	tion: 16.12.2021				
Approved: prof. PhD Ľubomír Kováč, CSc.	r. Oľga Orosová, CSc., prof	RNDr. Stanislav Krajči, PhD., prof. RNDr.			

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: ÚINF/ MPPc/15	ID: ÚINF/ Course name: Continuous practice teaching I					
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	nd the method: ce rse-load (hours): ly period: 4t esent					
Number of ECTS cr	edits: 2					
Recommended seme	ster/trimester of the course: 3.					
Course level: II.						
Prerequisities: ÚINF	/MPPb/15					
Conditions for cours Conditions for cours Conditions for ongoin 1. Observations in 6 1 2. Independent leadir 3. Participation in and 4. Active participation Conditions for the fir 1. Submission of 6 of 2. Submission of 6 of 3. Submission of a lis 4. Submission of a lis 5. Submission of a re 6. Submission of a fe Conditions for succes Fulfillment of all ong	a completion: Ing evaluation: lessons of the subject of informatics. Ing of 18 lessons of the subject informatics. alyzes from 20 lessons with a teacher trainer. In in out-of-class and after-school activities. In al evaluation: Deservation records from lessons. Lesson projects of preparation for lessons. Set of observations and own lesson of the trainee. Evaluation of the trainee's teaching practice. In the continuous pedagogical practice. In the continuous pedagogical practice. In the completion of the course: In the course					
Learning outcomes: Under the professional pedagogical skills in of-class and after-sch	al supervision of an experienced teacher trainer, the student acquires practical teaching the subject of informatics. He gets acquainted with school life, out- tool activities activities.					
Brief outline of the c Observations of teach aids, leading own less out-of-class and after	ourse: ler trainer lessons, consultations of lesson preparations, preparation of teaching sons, methodological and scientific analysis of lessons, active participation in -school activities.					

### **Recommended literature:**

KOSOVÁ, Beata, Alena TOMENGOVÁ et al., 2015. Profesijná praktická príprava budúcich učiteľov [online]. Banská Bystrica: Vydavateľstvo Belianum, Univerzita Mateja Bela, Banská Bystrica, 226 pp. [cited. 2021-7-28]. ISBN 978-80-557-0860-7. Available from: https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667

OROSOVÁ, Renáta and Zuzana BOBEROVÁ, 2016. Pregraduálna príprava učiteľov: Organizácia pedagogickej praxe na UPJŠ [online]. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 142 pp. [cited 2021-7-28]. ISBN 978-80-8152-460-8. Available from: https:// unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickejpraxe-na-upjs

BOBEROVÁ, Zuzana, 2017. Začínajúci učiteľ a školská legislatíva I. [online]. Košice:

Univerzita Pavla Jozefa Šafárika v Košiciach, 104 pp. [cited 2021-7-28]. ISBN

978-80-8152-490-5. Available from: https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i

Current informatics textbooks for primary and secondary schools in Slovakia.

### **Course language:**

Slovak

### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

### **Course assessment**

Total number of assessed students: 20

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 04.08.2021

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚBEV/ MPPd/15	Ourse ID: ÚBEV/       Course name: Continuous practice teaching II         PPd/15       PPd/15			
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	nd the method: ce rse-load (hours): y period: 6t esent			
Number of ECTS cr	edits: 2			
Recommended seme	ster/trimester of the cours	<b>:</b> 4.		
Course level: II.				
Prerequisities: ÚBEV	V/MPPc/15			
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language:				
Notes:				
<b>Course assessment</b> Total number of asses	ssed students: 276			
abs n				
100.0 0.0				
Provides:				
Date of last modifica	tion: 16.12.2021			
Approved: prof. PhD Ľubomír Kováč, CSc.	r. Oľga Orosová, CSc., prof	RNDr. Stanislav Krajči, PhD., prof. RNDr.		

Faculty: Faculty of S Course ID: ÚINF/ MPPd/15 Course type, scope a	cience Course name: Continuous practice teaching II
Course ID: ÚINF/ MPPd/15 Course type, scope a	Course name: Continuous practice teaching II
Course type, scope a	
Course type: Practic Recommended cour Per week: Per stud Course method: pre	nd the method: ce rse-load (hours): ly period: 6t esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 4.
Course level: II.	
Prerequisities: ÚINF	/MPPc/15
<ol> <li>Observations in 8 1</li> <li>Independent leading</li> <li>Participation in and</li> <li>Active participation</li> <li>Conditions for the fire</li> <li>Submission of 8 of</li> <li>Submission of 30 1</li> <li>Submission of a list</li> <li>Submission of a re</li> <li>Submission of a fee</li> <li>Submission of a fee</li> <li>Conditions for succes</li> <li>Fulfillment of all ong</li> </ol>	lessons of the subject of informatics. ag of 30 lessons of the subject informatics. alyzes from 30 lessons with a teacher trainer. n in out-of-class and after-school activities. hal evaluation: oservation records from lessons. esson projects of preparation for lessons. st of observations and own lesson of the trainee. evaluation of the trainee's teaching practice. port on the continuous pedagogical practice. edback sheet from the continuous pedagogical practice. ssful completion of the course: going and final assignments.
Learning outcomes: Under the profession pedagogical skills in of-class and after-sch	al supervision of an experienced teacher trainer, the student acquires practical teaching the subject of informatics. He gets acquainted with school life, out- tool activities activities.
Brief outline of the c Observations of teach aids, leading own less out-of-class and after	ourse: her trainer lessons, consultations of lesson preparations, preparation of teaching sons, methodological and scientific analysis of lessons, active participation in r-school activities.

KOSOVÁ, Beata, Alena TOMENGOVÁ et al., 2015. Profesijná praktická príprava budúcich učiteľov [online]. Banská Bystrica: Vydavateľstvo Belianum, Univerzita Mateja Bela, Banská Bystrica, 226 pp. [cited. 2021-7-28]. ISBN 978-80-557-0860-7. Available from: https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667

OROSOVÁ, Renáta and Zuzana BOBEROVÁ, 2016. Pregraduálna príprava učiteľov: Organizácia pedagogickej praxe na UPJŠ [online]. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 142 pp. [cited 2021-7-28]. ISBN 978-80-8152-460-8. Available from: https:// unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickejpraxe-na-upjs

BOBEROVÁ, Zuzana, 2017. Začínajúci učiteľ a školská legislatíva I. [online]. Košice:

Univerzita Pavla Jozefa Šafárika v Košiciach, 104 pp. [cited 2021-7-28]. ISBN

978-80-8152-490-5. Available from: https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i

Current informatics textbooks for primary and secondary schools in Slovakia.

### **Course language:**

Slovak

### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

### **Course assessment**

Total number of assessed students: 17

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 04.08.2021

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
Course ID: KP TTUP/15	Course ID: KPE/       Course name: Creating Text Teaching Aids         TTUP/15       Course name: Creating Text Teaching Aids					
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	cope and the met Practice d course-load (h er study period: d: present	thod: ours): 28				
Number of EC	TS credits: 2	4 641	2			
Recommended	semester/trimes	ster of the cours	<b>e:</b> 2.			
Course level: II						
Prerequisities:						
<b>Conditions for</b>	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessm Total number of	nent f assessed studen	ts: 229				
А	В	С	D	Е	FX	
57.64	30.13	8.73	2.62	0.87	0.0	
Provides: doc. ]	PaedDr. Renáta (	Drosová, PhD.				
Date of last mo	dification: 12.03	3.2024				
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prof	RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.	

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
<b>Course ID:</b> KSSFaK/ KJPUAP/15	Course na	me: Culture of	Spoken Discours	e	
Course type, sc Course type: I Recommended Per week: 1 / 2 Course metho	ope and the met Lecture / Practice d course-load (h l Per study perio d: present	hod: ours): od: 14 / 14			
Number of EC'	TS credits: 2				
Recommended	semester/trimes	ter of the cours	se: 1.		
Course level: II	•				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number of	ent f assessed studen	ts: 0			
А	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: PhDr	. Iveta Bónová, P	hD.	•		
Date of last mo	dification: 24.06	.2022			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., pro	f. RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.

University: P. J. Safa	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ ODPU/22	Course name: Defence of diploma thesis
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent
Number of ECTS cr	edits: 14
Recommended seme	ster/trimester of the course:
Course level: II.	
Prerequisities:	
The diploma thesis is fraud and must meet 21/2021, which lays Košice and its compo and in the process of	the result of the student's own work. It must not show elements of academic the criteria of good research practice defined in the Rector's Decision no down the rules for assessing plagiarism at Pavol Jozef Šafárik University ir nents. Fulfillment of the criteria is verified mainly in the process of supervisior thesis defense. Failure to do so is reason for disciplinary action.
Learning outcomes: The diploma thesis d field of study, acquis profile of the graduate selected field problem of content, formal and 1/2011 on the basic r the 1st, 2nd and comb	emonstrates mastery of extended theory and professional terminology of the ition of knowledge, skills and competencies in accordance with the declared e of the study program, as well as the ability to apply them creatively in solving ns. Student demonstrates the ability of independent professional work in terms d ethical. Further details on the diploma thesis are determined by Directive no requirements of final theses and the Study Regulations of UPJŠ in Košice for bined 1st and 2nd degree.
<b>Brief outline of the c</b> 1. Elaboration of the 2, Presentation of the 3. Answering questio	<b>course:</b> diploma thesis in accordance with the instructions of the supervisor. results of the diploma thesis before the examination commission. ons related to the topic of the diploma thesis within the discussion.
<b>Recommended litera</b> The recommended lit diploma thesis.	iture: terature is determined individually in accordance with the topic of the
<b>Course language:</b> Slovak and optionally	y English.

Course assessn Total number o	nent f assessed studen	ts: 2					
A B C D E FX							
50.0	50.0	0.0	0.0	0.0	0.0		
Provides:							
Date of last modification: 08.02.2022							
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.							

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	Science			
Course ID: ÚBEV/ DNR/06	Course name: Dendrology			
Course type, scope a Course type: Lectu Recommended cou Per week: 2 / 2 Per Course method: pro	and the method: re / Practice rse-load (hours): study period: 28 / 28 esent			
Number of ECTS cr	redits: 5			
Recommended seme	ester/trimester of the course: 2.			
Course level: II.				
Prerequisities:				

#### **Conditions for course completion:**

1. Attending lectures is optional, participation in exercises is mandatory. 2. During the exercises, it is necessary to master the recognition of selected trees and shrubs in their various phenological phases according to significant identifying features (buds, bark, shape of leaves and flowers, habitus) and some species-specific features (cork wings, thorns, prominent pubescence, distinctive color of shoots in winter, etc.). 3. Within the framework of forest tree seed production, it is necessary to master the identification of fruits and seeds of selected taxa of woody plants.

#### Learning outcomes:

### Brief outline of the course:

1. Summary of basic terms within the subject Dendrology. 2. Individual variability of woody plants (morphological, biochemical, biological, technical forms). 3. Geographic variability of woody plants (climate type, edaphotype). 4. Individual ecological requirements of woody plants with a basic overview of taxa (woody plants in shade and sunny conditions, oceanic and continental climate). 5. Special communities of woody plants, their characteristics and overview of the most important taxa. Pioneer woody plants, melioration woody plants, woody plants in ravines and scree, forest-steppe woody plants, floodplain woody plants, peatland woody plants and woody plants of upper forest border. 6. Saving the gene pool of forest trees (generative and clone seed orchards, selected trees and stands). 7. Selected chapters from the seed production of forest trees (external and internal factors of seed production, methods of collecting and technology of seed processing and its subsequent storage). 8. Selected chapters from forest tree seed production (seed lifespan, short-term and long-term seed storage, germination ability and germination process, methods of pre-sowing seed preparation). 9. Introduction of woody plants - definition of the term, phases of introduction. Benefits of introduction and possible environmental risks. 10. Invasive trees, overview and characteristics of the most important taxa. Ecological, economic and health consequences of invasions. 11. The most important dendrological objects in Slovakia (Mlyňany Arboretum, Borová hora Arboretum, Kysihýbel Arboretum, Topoľčianky Castle Park). 12. Introduction to arboriculture, protection and care of trees growing outside the forest. The exercises are aimed at practical recognizing the most important coniferous and deciduous both native and introduced trees. During the summer semester, dealing with woody plants in the winter (in a sterile state), the specific characteristics of woody plants (general habitus of the wood, buds, thorns, specific color of the surface of the branch, pubescence, cork lamellas, etc.). During the growing season, recognizing the shape of the leaves and flowers..

#### **Recommended literature:**

### Course language:

### Notes:

### Course assessment

Total number of assessed students: 82

А	В	С	D	Е	FX		
71.95	13.41	7.32	7.32	0.0	0.0		
Provides: Ing. Peter Kelbel, Dr.							

Date of last modification: 19.07.2022

University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	Science					
<b>Course ID:</b> ÚINF/ TSM1a/15	Course ID: ÚINF/Course name: Development and processing of multimedia'SM1a/15					
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pr	and the method: ce irse-load (hours): idy period: 28 esent					
Number of ECTS cr	redits: 2					
Recommended seme	ester/trimester of the course: 1., 3.					
Course level: I., II.						
Prerequisities:						
Conditions for court Conditions for ongoin 1. Creation of an edu 2. Creation of a post 3. Creation of an edu 4. Creation of an inst Conditions for succe Obtaining at least 50	se completion: ing evaluation: acational animation. er with vector and raster graphics. acational audio recording. tructional educational video. essful completion of the course: % of points for ongoing assignments.					
Learning outcomes: After completing this a) deepen the knowle processing of multim b) create multimedia selected topics of sch c) analyze and discu informatics.	s course, students are able to: edge of the principles of multimedia and to practice skills in the creation and hedia, a teaching aids with accompanying methodological commentary for teaching hool informatics, ass the issue of teaching the creation and processing of multimedia in school					
Brief outline of the of	course: rocessing of raster image. rocessing of raster image. ns. graphics. graphics. graphics. printing printing ound processing. sound processing. video processing.					
Recommended liter	ature:					

LACHS, V., 2000. Making Multimedia in the Classroom. London : RoutledgeFalemer. ISBN 0415216842.

GÖBEL, S. et al., 2006. Technologies for Interactive Digital Storytelling and Entertainment (LNCS 4326). Darmstadt : Springer. ISBN 3540499342.

ADÁMEK, R. et al., 2010. Moderná didaktická technika v práci učiteľa. Elfa, s.r.o., Košice. ISBN 978-80-8086-135-3.

GUNIŠ, Ján, Ľudmila JAŠKOVÁ, Katarína MIKOLAJOVÁ and Jana PEKÁROVÁ, 2009. Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika: Multimédiá. Bratislava: Štátny pedagogický ústav, 52 p. ISBN 978-80-89225-51-4. Also available from: https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/ multimedia.pdf

ŠNAJDER, Ľubomír and Marián KIREŠ, 2005. Informatika pre stredné školy - Práca s multimédiami: tematický zošit. Bratislava: Slovenské pedagogické nakladateľstvo. ISBN 80-10-00422-7.

### Course language:

Slovak and partly English due to selected programs and information sources

### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

### Course assessment

Total number of assessed students: 22

А	В	С	D	Е	FX
59.09	18.18	13.64	4.55	4.55	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD., Mgr. Katarína Brinziková

Date of last modification: 24.08.2021
University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ TSM1b/15	Course name: Development and processing of multimedia
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: pro	nd the method: ce rse-load (hours): dy period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 2., 4.
Course level: II.	
Prerequisities:	
Conditions for cours Conditions for ongoi 1. Programmed SVG 2. Programmed anim 3. Programmed soun 4. Programmed mult Conditions for succe Obtaining at least 50	a completion: ng evaluation: image. ation. d or melody. imedia application. ssful completion of the course: % of points for ongoing assignments.
Learning outcomes: After completing this a) explain the basic p b) design and progra	course, students are able to: principles and procedures in multimedia programming, m multimedia applications.
<b>Brief outline of the o</b> 1. Programming of st 2. Programming of st 3. Programming of st 4. Programming of st 5. Animation program 6. Animation program 7. Animation program 8. Programming of st 9. Programming of st 10. Programming of 11. Creating a multim 12. Creating a multim	ourse: ill images. ill images. ill images. ill images. nming. nming. nming. punds and melodies. punds and melodies. sounds and melodies. nedia application.
<b>Recommended liters</b> SATHAYE, Ninad, 2 Publishing, ISPN 07	ature: 010. Python Multimedia: Beginner's Guide. Birmingham, UK: Packt

Publishing. ISBN 978-1-849510-16-5. GUNIŠ, Ján, Viera MICHALIČKOVÁ, Martin CÁPAY a Ľubomír ŠNAJDER, 2020. Riešenie problémov a programovanie [online]. Bratislava: Centrum vedecko-technických informácií SR [cited 2021-7-10]. ISBN 9788089965625. Available from: https://registracia.itakademia.sk/ media/themes/nip-rpp.pdf

BLAHO, Andrej, 2016. Programovanie v Pythone 1 (prednášky k predmetu Programovanie (1) 1-AIN-130/13) [online]. Bratislava: Knižničné a edičné centrum FMFI UK, 322 s. [cited 2021-7-10]. ISBN 978-80-8147-067-7. Available from: http://python.input.sk/

#### **Course language:**

Slovak and partly English due to selected programs and information sources

Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

#### **Course assessment**

Total number of assessed students: 6

А	В	С	D	Е	FX
16.67	66.67	16.67	0.0	0.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 24.08.2021

University: P. J. Šafán	ik University in Košice							
Faculty: Faculty of So	Faculty: Faculty of Science							
Course ID: KPPaPZ/VPU/17	Course name: Developmental Psychology for Teachers							
Course type, scope an Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 sent							
Number of ECTS cro	edits: 2							
Recommended seme	ster/trimester of the course: 1.							
Course level: II.								
Prerequisities:								
<b>Conditions for cours</b> Evaluation of particip of seminar work,	e completion: bation in teaching, continuous evaluation of activity in seminars, evaluation							
Learning outcomes: The graduate will un characterize the norm school age and adoles published in foreign the topics covered. The of parents and friends psychology in the pra	derstand the principles of developmental psychology, and will be able to in in separate developmental stages with a specific focus on the period of cence. As part of the seminar work, a students will process current knowledge journals. They will have a knowledge about the current social discourse on the graduate will be able to consider various aspects of the possible influence is on the development of piupils and apply the knowledge of developmental ctice of the teacher.							
Brief outline of the conditional determinants and far Socialization in separation the period of sch development. Application - communication with respective separationship with respective separationship with respective separationship with respective separations and separations are separations are separations and separations are separations and separations are sepa	<b>ourse:</b> actors of development, cognitive development, personality development. rate developmental stages (family, peers, school). Specifics of development ool age, in pubescence and adolescence. Parents and their role in child ation of knowledge of developmental psychology in the teacher's practice th students in different developmental stages, creating a teacher-student ect to the development needs of the student.							
Recommended litera Vágnerová, M. Vývoj Říčan, P. Cesta živote Thorová, K. Vývojov Macek, P. Adolesceno Matějček, Z rôzne o Bačíková, M. Psycho	<b>ture:</b> jová psychologie. Portál, Praha 2000 em. Portál, Praha, 2004. á psychologie. Portál, Praha, 2015. ce. Praha: Portál, 2003 diela lógia rodičovskej kontroly, Šafárik Press, Košice 2019							
Course language:								
Notes:								

Course assessn Total number o	nent f assessed studen	ts: 109					
А	В	С	D	Е	FX		
77.98	15.6	3.67	2.75	0.0	0.0		
Provides: doc. Mgr. Mária Bačíková, PhD.							
Date of last modification: 24.06.2022							
Approved: prot Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., pro	f. RNDr. Stanislav	v Krajči, PhD., p	rof. RNDr.		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚBEV/ DIB1/03	Course name: Didactics of biology
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 3 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 42 esent
Number of ECTS cr	edits: 6
Course level: II	ster/trimester of the course: 2.
Prerequisities: KPPa	PZ/PPgU/15 or KPE/DPP/14 or KPE/PDU/15
<b>Conditions for cours</b> It is a profiling subject lecture, the developed the final project accord final exam is oral. The Average points for conditional exam average of average 7-8 b. = C, of (evaluation is part of points to a grade: A 9 is calculated as a weight	<b>be completion:</b> et with compulsory participation in exercises. The activity at the output of the d and continuously submitted solutions to assignments from the exercises and ording to the assignment at the beginning of the semester are evaluated. The he share of the grade from the evaluated activities on the final grade: $10\%$ - ompleted assignments (min. 8 points/item) is counted as the value of the grade 9-10 b. as B for average 8-9 b. For a lower average value after correction: 6-7 b. = D, 5-6 b. = E. 10% - Output at the lecture. 20% - semester project the evaluation form). $60\%$ - the result of the final oral exam. Conversion of 05 - 100 B 85 - 94 C 65 - 84 D 55 - 64 E 50 - 54 FX 0 - 49 The resulting grade ghted average according to the standard value of classification grades A to E.
Learning outcomes: Meet specific subject didactic knowledges of learning. Selected	is teaching biology in high school and an elementary school. Learn and apply in the topics of the biology curriculum with respect of psychological principles biology teaching methods and technologies.
Brief outline of the c	ourse:

- 1 Didactics of biology in the system of sciences
- 2 Domains of biology education
- 3 Biology standards
- 4 Curriculum and textbooks in SR
- 5 Biological sciences
- 6 Complex of didactic tools of biology
- 7 Hands-on education as an educational concept
- 8 Teaching organization forms
- 9 Lesson preparation
- 10 Principles of knowledge
- 11 Formative and summative evaluation in biology
- 12 Biological educational strategies
- 13 Teaching aids of biology
- 14 School garden and the environment corner at school

15 Biological excursion

16 Working with talents and biological competitions for students

#### **Recommended literature:**

Katarína Kimáková Sprievodca didaktikou biológie, 2022 Šafárik press UPJŠ v Košiciach https:// unibook.upjs.sk/img/cms/2022/sprievodca-didaktikou-biologie.pdf Ganajová, M. a kol. Formatívne hodnotenie vo výučbe prírodných vied, matematiky a informatiky. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 2021. ISBN 9788081529733. Ganajová a kol. Formatívne hodnotenie a jeho implementácia do výučby prírodných vied, matematiky a informatiky. Bratislava: Wolters Kluwer SR, 2022. Školstvo. ISBN 9788057104834. Samuel Kai Wah Chu · Rebecca B. Reynolds, Nicole J. Tavares · Michele Notari, Celina Wing Yi Lee 21st Century Skills Development Through Inquiry Based Learning From Theory to Practice, Springer 2017 https://link.springer.com/content/pdf/10.1007/978-981-10-2481-8.pdf Kimáková, K.: Úvod do štúdia didaktiky biológie, elektronický študijný text, 2008 Kireš, M., Ješková, Z., Ganajová, M, Kimáková K.. Bádateľské aktivity v prírodovednom vzdelávaní, ŠPÚ 2016 Periodical publications for teaching biology. Internal study materials in Moodle https:// lms.upjs.sk/login/index.php Existing curriculum standards and biology textbooks for elementary and secondary schools Fišer, R.: Učíme deti myslet a učit se. Praha: Portál, 2011. 176 s. ISBN 978-80262-0043-7 Gavora, P.: Akí sú moji žiaci. (Pedagogická diagnostika žiaka). Nitra: ENIGMA, 2011. 216 s. ISBN 978-80-89132-91-1 Karnsová, M.: Jak budovat dobrý vztah mezi učitelem a žákem. Praha: Portál, 1995. 151 s. ISBN 80-7178-032-4

Kotrba, T., Lacina, L.: Praktické využití aktivizačných metod ve výuce. Brno: Společnost pro odbornou literaturu, 2007. 188 s. ISBN 978-80-87029-12-1

Kyriacou, Ch.: Klíčové dovednosti učitele. Praha: Portál, 1996. 153 s. ISBN 80-7178-022-7 Petty, G.: Moderní vyučování. Praha: Portál, 2013. 380 s. ISBN 80-7178-070-7

Silberman, M.: 101 Metod pre aktivní výcvik a vyučování. Praha: Portál, 1997. 312 s. ISBN: 80-7178-124-X

#### **Course language:**

SK, EN

Notes:

#### **Course assessment**

Total number of assessed students: 660

А	В	С	D	Е	FX
52.73	29.24	14.39	3.48	0.15	0.0

**Provides:** doc. RNDr. Katarína Kimáková, CSc., RNDr. Ivana Slepáková, PhD., PaedDr. Andrea Lešková, PhD., RNDr. Anna Mišianiková, PhD., Mgr. Zuzana Boberová, PhD.

#### Date of last modification: 12.02.2024

University: P. J. Šafári	k University in Košice
Faculty: Faculty of Sci	ience
Course ID: ÚINF/ DIN1a/15	Course name: Didactics of informatics
Course type, scope an Course type: Practice Recommended cours Per week: 3 Per stud Course method: pres	d the method: e-load (hours): y period: 42 ent
Number of ECTS cree	dits: 3
Recommended semest	ter/trimester of the course: 2.
Course level: II.	
Prerequisities:	
<ul> <li>Conditions for course Conditions for ongoing</li> <li>Proposal of a themat by 1 disponible hour.</li> <li>Creation of a conc informatics.</li> <li>Creation of a graded</li> <li>Proposal for the prej Conditions for success Obtaining at least 50%</li> <li>Learning outcomes: After completing this of a) acquire an overview informatics,</li> <li>create conceptual m school informatics,</li> </ul>	<b>completion:</b> g evaluation: ic plan for teaching informatics at secondary or elementary school extended ept map and specific educational objectives for selected topic of school I system of tasks for teaching selected topic of school informatics. paration of a lesson with a 5E inquiry cycle. ful completion of the course: o of points for ongoing assignments.
c) create a inquiry-base	ed methodology of teaching a seleced topic of school informatics.
<ul> <li>Brief outline of the co</li> <li>1. Objectives and co educational program. I</li> <li>2. Maturita on informa- plan.</li> <li>3. Logical structure of objectives and creation</li> <li>4. Educational task, its</li> <li>5. Creation of a graded</li> <li>6. Activating methods</li> <li>7. Activating methods</li> <li>7. Activating methods</li> <li>8. Activating methods</li> </ul>	<b>urse:</b> ntent of teaching informatics in primary and secondary schools. State nformatics textbooks. atics. Examples of school educational programs. Designing own thematic the curriculum, conceptual mapping. Determination of specific educational of a concept map for a selected topic of school informatics (RBT). forms, and parameters. A graded system of tasks. I system of tasks for teaching a selected topic of school informatics. of teaching school informatics (discussion and situational methods). s of teaching school informatics (staging methods, educational games, of teaching school informatics (problem teaching, peer learning).

9. Activating methods of teaching school informatics (project teaching, flipped learning).

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

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

12. Creating preparation for a lesson with a 5E learning cycle.

#### **Recommended literature:**

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

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

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

LUKÁČ, Stanislav, 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

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.

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/ aktivizujuce\_metody.pdf

#### **Course language:**

Slovak and partly English due to selected programs and information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

#### Course assessment

Total number of assessed students: 76

А	В	С	D	Е	FX
28.95	18.42	21.05	19.74	10.53	1.32

Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD., univerzitný docent

Date of last modification: 01.08.2021

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ DIN1b/15	Course name: Didactics of informatics
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of ECTS cro	edits: 5
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
Conditions for cours Conditions for ongoin 1. Creation of an inte 2. Microteaching with 3. Assessment of adm 4. Creation of an assig junior competition, co Conditions for the fir 1. Elaboration of a fivarious didactic fun selected topics of sch 2. Presentation of ow Conditions for succes Obtaining at least 500	e completion: ng evaluation: ractive educational aid. h a sample solution of an algorithmic problem. ninistered didactic test. gnment and a commented author's solution of the STEAM task for the PALMA prrection, and assessment of student solutions. hal evaluation: inal paper focused on the conceptual process, creation of assignments with ctions, naming misconceptions, and assessment of learning outcomes of ool informatics. n teacher's portfolio with discussion. asful completion of the course: % of points for ongoing and final assignments.
Learning outcomes: After completing this a) select and explain b) create and present c) analyze and assess d) design and discuss includes its own inter e) complete your own	course, students are able to: essential concepts for a selected topic of school informatics, an assignment and a sample solution to an algorithmic problem, students' assignments and identify their misconceptions, s the methodology of teaching a selected topic of school informatics, which ractive teaching aid, n teaching portfolio.
<ul> <li>Brief outline of the c</li> <li>1. Assessment of stuc</li> <li>2. Assessment of stuc</li> <li>3. Conceptual process</li> <li>4. Informatics concept</li> <li>5. Informatics concept</li> <li>6. Methodology of the compression).</li> </ul>	ourse: lents' learning outcomes in school informatics. Didactic tests. lent projects. Student portfolio. s in school informatics. ots in informatics competitions (iBobor). ots in activities outside the computer (Computer Science Unplugged). teaching selected topics in the field of Representation and tools (coding,

7. Methodology of teaching selected topics in the field of Representation and tools (encryption, steganography).

8. Methodology of teaching selected topics in the field of Representation and tools (data analysis and visualization).

9. Methodology of teaching selected topics in the field of Communication and Cooperation (communication and collaboration tools).

10. Methodology of teaching selected topics in the field of hardware and software (kits with sensors and actuators).

11. Methodology of teaching selected topics in the field of Information Society (information security and cybersecurity).

12. Completion of the portfolio of an informatics teacher (thematic plan, preparations from teaching self-reflection of student, worksheet with formative assessment tools, interactive educational aid, sample solution of an algorithmic problem, maturita assignment, system of tasks with increasing difficulty, assessment of an administered didactic test).

#### **Recommended literature:**

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

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 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/

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/

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/

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

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

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

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

#### **Course language:**

Slovak and partly English due to selected programs and information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

#### Course assessment

Total number of assessed students: 158

А	В	С	D	Е	FX
18.99	32.91	23.42	15.82	8.23	0.63

Provides: doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD., univerzitný docent

#### Date of last modification: 01.08.2021

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
<b>Course ID:</b> ÚINF/ DPRG/19	<b>Course name:</b> Didactics of programming					

# 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: 4

#### Recommended semester/trimester of the course: 2.

Course level: II.

Prerequisities:

#### **Conditions for course completion:**

Conditions for ongoing evaluation:

1. Creation of an assignment and an commented author's solution of a task using several problemsolving strategies.

2. Proposal of a pair of maturita assignments with solutions and methodological comments.

3. Creation of an assignment and an commented author's solution of the STEAM task for the PALMA junior competition, correction and evaluation of student solutions.

Conditions for the final evaluation:

1. Creation and presentation of the final project with a collection of solved and commented tasks for a selected topic of programming in Python.

2. Elaboration of a final test focused on the elaboration of sample and commented solutions to given problems in Python and Scratch languages.

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:

a) define specific educational objectives for a selected topic of programming,

b) create assignments and sample solutions for STEAM tasks using various problem-solving strategies,

c) analyze and evaluate solutions to student tasks and identify their misconceptions,

d) design a methodology for teaching a selected programming topic.

#### Brief outline of the course:

1. Educational standards in programming in secondary and primary schools. Graduation in informatics.

- 2. Programming competitions.
- 3. Algorithmic thinking. Algorithmic games.
- 4. Computational thinking. Problem solving strategies.
- 5. Data structures around us, algorithms over data structures.
- 6. Teaching selected algorithms and problem solving strategies (recursion).
- 7. Basic concepts and misconceptions of programming.

- 8. Teaching programming in Scratch.
- 9. Teaching programming in AppInventor.
- 10. Teaching programming in Python.
- 11. Programming of mathematical models of selected phenomena/systems.
- 12. Specifics of computer arithmetic.

### **Recommended literature:**

BEECHER, Karl, 2017. Computational thinking: A beginner's guide to problem-solving and programming. © BCS Learning & Development, 308 p. ISBN 978-1-78017-36-41.

COMPUTING AT SCHOOL. Computational Thinking Concepts and Approaches

Barefoot [online]. [cited 2021-7-12]. Available from: https://www.barefootcomputing.org/ concept-approaches/computational-thinking-concepts-and-approaches

FINCHER, Sally and Marian PETRE, 2004. Computer science education research. New York: Taylor & Francis. ISBN 9789026519697.

GUTSCHANK, Jörg et al. 2019. coding in STEM Education [online]. Berlin: Science

on Stage Deutschland e.V., 76 p. [cited 2021-7-10]. ISBN 978-3-942524-58-2.

Available from: https://www.science-on-stage.eu/sites/default/files/material/

coding\_in\_stem\_education\_en\_2nd\_edition.pdf

BRIGGS, Jason R., 2013. Python for kids: a playful introduction to programming. San Francisco: No Starch Press. ISBN 1593274076.

BLAHO, Andrej, 2016. Programovanie v Pythone 1 (prednášky k predmetu Programovanie (1) 1-AIN-130/13) [online]. Bratislava: Knižničné a edičné centrum FMFI UK, 322 p. [cited

2021-7-10]. ISBN 978-80-8147-067-7. Available from: http://python.input.sk/

ŠNAJDER, Ľubomír and Ján GUNIŠ, 2014. Tvorba úloh pre programátorské súťaže

[online]. 1. Košice: Prírodovedecká fakulta UPJŠ v Košiciach, 79 p. [cited 2021-7-10]. ISBN 978-80-8152-139-3. Available from: https://unibook.upjs.sk/img/cms/2014/pf/tvorba-uloh-pre-prog-sutaze.pdf

GUNIŠ, Ján and Ľubomír ŠNAJDER, 2021. Programovanie v Pythone 1. Košice: Prírodovedecká fakulta UPJŠ v Košiciach, 170 p. ISBN 978-80-8152-969-6. Also available from: https://unibook.upjs.sk/img/cms/2021/pf/programovanie-v-pythone-1.pdf

GUNIŠ, Ján, Viera MICHALIČKOVÁ, Martin CÁPAY and Ľubomír ŠNAJDER, 2020. Riešenie problémov a programovanie [online]. Bratislava: Centrum vedecko-technických informácií SR [cited 2021-7-10]. ISBN 9788089965625. Available from: https://registracia.itakademia.sk/ media/themes/nip-rpp.pdf

ŠNAJDER, Ľubomír, Gabriela LOVÁSZOVÁ, Viera MICHALIČKOVÁ and Ján GUNIŠ, 2020. Programovanie mobilných zariadení [online]. Bratislava: Centrum vedecko-technických informácií SR, 300 p. [cited 2020-11-30]. ISBN 978-80-89965-63-2. Available from: https://registracia.itakademia.sk/media/themes/nip-pmz.pdf

#### **Course language:**

Slovak and partly English due to selected programs and information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

#### Course assessment

Total number of assessed students: 147

А	В	С	D	Е	FX
14.29	33.33	22.45	14.29	12.24	3.4

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 03.08.2021

	· · · · · · · · · · · · · · · · · · ·					
University: P. J. Safa	rik University in Kosice					
Faculty: Faculty of S	cience					
Course ID: ÚBEV/ DPP2/22	ourse ID: ÚBEV/     Course name: Diploma Project II       PP2/22     PP2/22					
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent					
Number of ECTS cr	edits: 3					
Recommended seme	ster/trimester of the cours	<b>e:</b> 2.				
Course level: II.						
Prerequisities:						
<b>Conditions for cours</b> Regular acquaintance the literature on the to	e completion: e of the supervisor with the opic, first results and, if nec	research process, regular consultations, study of essary, modification of the project.				
Learning outcomes: The student practica reports on them at th announced.	lly manages the necessary le seminar of the departmer	methodology and obtained the first results. He at, where the assignment of the diploma thesis is				
Brief outline of the c Data collection to ver	ourse: rify hypotheses, study of cu	rrent literature.				
Recommended litera Recommended profest diploma thesis assign requisites of final the access, including ann 15 March 2010 no. M rigorous and habilitat and habilitation thesis theses and habilitation and control of original Supplement no. 1 and dotx format on the Ch	<b>iture:</b> ssional literature on a specif ment. Methodological guide ses, their bibliographic regis exes; Decree of the Ministry IŠSR-5 / 2010-071 on the m tion thesis and the format of s; Directive no. 1/2011 on the n theses, their publication and ality valid for Pavel Jozef Ša d no. 2 to Directive no. 1/20 RZP website (Central Regis	The topic of the diploma thesis is a part of the eline 14/2009-R of 27 August 2009 on the stration, control of originality, storage and y of Education of the Slovak Republic of model of the cover and title page of the final, The exchange of data on the final, rigorous he basic requirements of final theses, rigorous and making available during their preservation afárik University in Košice and its components; 11 Template for the creation of ZP in dot and ter of Final Theses)				
Course language:						
Notes:						
Course assessment Total number of asses	ssed students: 22					
	abs	n				
	100.0 0.0					
k		<u>.</u>				

#### **Provides:**

**Date of last modification:** 13.05.2022

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
<b>Course ID:</b> ÚINF/ DPP2/14	Course ID: ÚINF/ Course name: Diploma Project II PP2/14			
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent			
Number of ECIS cr	edits: 2	2		
Recommended seme	ster/trimester of the cours	e: 2.		
Course level: 11.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language:				
Notes:				
<b>Course assessment</b> Total number of asses	ssed students: 15			
	abs	n		
100.0 0.0				
Provides:				
Date of last modifica	tion:			
Approved: prof. PhD Ľubomír Kováč, CSc.	r. Oľga Orosová, CSc., prof	. RNDr. Stanislav Krajči, PhD., prof. RNDr.		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚBEV/ DPP3/22	Course name: Diploma Project III
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent
Number of ECTS cr	edits: 3
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> Regular consultation Presentation at a sem	e completion: as on the progress and results of the project with the thesis supervisor. inar on a diploma project with preliminary results.
Learning outcomes: The student processe aids. He has the data and formulate conclu- monitor new relevant	d the obtained data and / or verified the created methodological materials or to process the theoretical part of his thesis and to confirm / refute hypotheses asions. He begins to formulate the text of his diploma thesis and continues to a information.
Brief outline of the c Processing and interp	ourse: pretation of results.
Recommended litera Recommended profest diploma thesis assign requisites of final the access, including ann 15 March 2010 no. M rigorous and habilitat and habilitation thesis theses and habilitation and control of origina Supplement no. 1 and dotx format on the C	<b>Ature:</b> ssional literature on a specific topic of the diploma thesis is a part of the ses, their bibliographic registration, control of originality, storage and exes; Decree of the Ministry of Education of the Slovak Republic of IŠSR-5 / 2010-071 on the model of the cover and title page of the final, tion thesis and the format of the exchange of data on the final, rigorous s; Directive no. 1/2011 on the basic requirements of final theses, rigorous n theses, their publication and making available during their preservation ality valid for Pavel Jozef Šafárik University in Košice and its components; d no. 2 to Directive no. 1/2011 Template for the creation of ZP in dot and RZP website (Central Register of Final Theses)
<b>Course language:</b> SK EN	
Notes:	

<b>Course assessment</b> Total number of assessed students: 40					
abs	n				
100.0	0.0				
Provides:					
Date of last modification: 13.05.2022					
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
<b>Course ID:</b> ÚINF/ DPP3/14	Course ID: ÚINF/ Course name: Diploma Project III PPP3/14				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent				
Number of EC18 cr	star/trimostor of the source	at 2			
Course level: II	ster/trimester of the cours	e: 5.			
Duono guigiti ogo					
Prerequisities:	1.4				
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
<b>Course assessment</b> Total number of asses	ssed students: 8				
	abs	n			
100.0 0.0					
Provides:	Provides:				
Date of last modifica	tion:				
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J.	. Šafárik Univers	ity in Košice			
Faculty: Faculty	y of Science				
Course ID: ÚB ODP/22	EV/ Course na	ame: Diploma Th	nesis and its Defe	ense	
Course type, sc Course type: Recommended Per week: Per Course method	ope and the met d course-load (h r study period: d: present	thod: ours):			
Number of EC	<b>FS credits:</b> 14				
Recommended	semester/trimes	ster of the cours	e:		
Course level: II	•				
Prerequisities:	ÚBEV/DPP3/22				
The diploma the academic fraud no. 21/2021, wh in Košice and it and in the proce	esis is the result and must meet th nich lays down th ts components. F ess of job defense	of the student's of the criteria of good the rules for asses Sulfillment of the e. Failure to do so	own creative wor research practice sing plagiarism a criteria is verifie o is grounds for d	k. It must not sh defined in the R t Pavel Jozef Ša d mainly in the disciplinary action	ow elements of ector's Decision fárik University training process n.
Learning outco With the diplor terminology of with the declare in an original w of content, form 1/2011 on the b the 1st, 2nd and	mes: na thesis the study the field of study ed profile of the g ay. The student of nal and ethical. Fu asic requirement l joint 1st and 2nd	ident demonstrat acquisition of k graduate of the st lemonstrates the urther details of t s of final theses d degree.	es mastery of ex mowledge, skills udy program, as ability of indepen he diploma thesis and the Study Re	and competence and competence well as the abilit ident professiona are determined gulations of UP.	nd professional s in accordance y to apply them al work in terms by Directive no. JŠ in Košice for
<b>Brief outline of</b> Preparation and Submission of t Presentation of Qualified discus	the course: submission of the he printed version work results and ssion on the topic	he diploma thesis on to the opponent answers to oppo c with the commi	to the CRZP. nt. nents' questions. ission for master'	s state final exan	15.
<b>Recommended</b> Listed in the app	<b>literature:</b> proved thesis ass	signment.			
Course languag	ge:				
Notes:					
Course assessm Total number of	ent f assessed studen	ts: 15			
А	В	С	D	Е	FX
86.67	13.33	0.0	0.0	0.0	0.0

#### **Provides:**

**Date of last modification:** 13.05.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚBEV/ DPP1/22	Course name: Diploma project I
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 1.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> Regular acquaintance research plan. Active departments, where t	e completion: e of the supervisor with the progress on the agreed tasks. Submission of a e participation in seminars organized for diploma projects implemented at he topic of the project and the assignment of the diploma thesis are listed.
Learning outcomes: The student has mas questions and has a r the diploma project a on a topic listed at A skilled in communica	tered the theoretical preparation for the assigned topic, formulates research esearch plan, or the first preliminary results. The student can also implement t a workplace outside the UPJŠ under the guidance of an expert from practice, PU ÚBEV PF UPJŠ in Košice. He also has a job consultant at ÚBEV, he is tion with experts in electronic and face-to-face form.
<b>Brief outline of the c</b> Hypothesis formulati	ourse: on, study of literature, preparation of materials for hypothesis testing.
Recommended litera Recommended profest diploma thesis assign requisites of final the access, including ann 15 March 2010 no. M rigorous and habilitat and habilitation thesis theses and habilitatio and control of origina Supplement no. 1 and dotx format on the Cl	<b>Inture:</b> ssional literature on a specific topic of the diploma thesis is a part of the iment. Methodological guideline 14/2009-R of 27 August 2009 on the ses, their bibliographic registration, control of originality, storage and exes; Decree of the Ministry of Education of the Slovak Republic of IŠSR-5 / 2010-071 on the model of the cover and title page of the final, tion thesis and the format of the exchange of data on the final, rigorous s; Directive no. 1/2011 on the basic requirements of final theses, rigorous n theses, their publication and making available during their preservation ality valid for Pavel Jozef Šafárik University in Košice and its components; d no. 2 to Directive no. 1/2011 Template for the creation of ZP in dot and RZP website (Central Register of Final Theses)
Course language:	
Notes: SK, EN	

<b>Course assessment</b> Total number of assessed students: 32					
abs	n				
100.0	0.0				
Provides:					
Date of last modification: 13.05.2022					
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: KPPaPZ/PUDU/15	Course name: Drug Addiction Prevention in Educational Practice					
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent					
Number of ECTS cr	edits: 4					
Recommended seme	ster/trimester of the course: 1., 3.					
Course level: II.						
Prerequisities:						
<b>Conditions for cours</b> 1st part of the semes semester evaluation: preparation (10p) and of the evaluation - w 90p and the final grad less: FX. Detailed inf of the subject will be	<b>Se completion:</b> ter evaluation: active participation in the training part (30p). 2nd part of the active participation in workshops (20p) 3rd part of the semester evaluation - l implementation (10p) of block activities (20p, minimum 11 points). 4th part ritten knowledge exam (20p, minimum 11 points). In total, students can get de is as follows: 90 - 82: A 81 - 73: B 72 - 66: C 65 - 59: D 58 - 54: E 53 and formation in the electronic bulletin board of the course in AIS2. The teaching realized by a combined method.					
Learning outcomes: The student understand and explain the detern use. Understands and non-substance addict The student is also a approaches in preven The student is able to in the field of drug u teacher and prevention	nds principals of research data based prevention of risk behavior, can describe minants of risk behavior as well as protective and risk factors for substance a dequately interprets the theory explaining the background of substance and ions. able to state and classify the types and forms of prevention, strategies and tion, can distinguish effective strategies from ineffective ones. apply the learned rules, procedures and competencies for the work of a teacher use prevention, as well as the acquired professional skills for the work of a on coordinator at school.					
Brief outline of the c Psychological, pedag prevention Prevention of substar Primary, secondary a Universal, selective a Effective substance p Preparation and imple	gogical-psychological, medical and legal-forensic aspects of substance use nee use based on risk and resilience nd tertiary prevention of substance use and indicated prevention of substance use prevention strategies based on research data ementation of components of effective substance use prevention programs					
Orosová, O. a kol. (2 internetu v školskej p	nure: 012). Základy prevencie užívania drog a problematického používania praxi. Košice: UPJŠ.					

Sloboda, Z., & Bukoski, J. (Eds.). (2006). Handbook of Drug Abuse Prevention: Theory, Science, and Practice. New York: Springer.

National and international scientific journals.

### **Course language:**

slovak

#### Notes:

#### Course assessment

Total number of assessed students: 419

А	В	С	D	Е	FX
50.84	41.29	7.16	0.72	0.0	0.0

**Provides:** prof. PhDr. Oľga Orosová, CSc., Mgr. Lucia Barbierik, PhD., Mgr. Viera Čurová, PhD., Mgr. Janka Liptáková

#### Date of last modification: 24.06.2022

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KPPaPZ/VP/09	Course ID: Course name: Educational Counselling				
Course type, sc Course type: 1 Recommended Per week: 2 P Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	TS credits: 2				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	-				
Prerequisities:					
<b>Conditions for</b>	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number o	nent f assessed studen	ts: 233			
А	В	С	D	Е	FX
73.82	16.31	6.44	2.58	0.86	0.0
Provides: PhDr. Anna Janovská, PhD.					
Date of last mo	dification: 24.06	5.2022			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prot	f. RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP ZSP/15	ourse ID: KPE/ Course name: Essentials of Special Education SP/15				
Course type, so Course type: 1 Recommended Per week: 2 P Course metho	cope and the me Lecture d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	TS credits: 2				
Recommended	semester/trimes	ster of the cours	e: 3.		
Course level: I	- -				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
<b>Course assessn</b> Total number o	nent f assessed studen	its: 700			
А	В	С	D	Е	FX
56.14	24.14	11.14	5.14	2.71	0.71
Provides: PaedDr. Michal Novocký, PhD.					
Date of last mo	dification: 12.03	3.2024			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Or , CSc.	osová, CSc., prof	. RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
Course ID: ÚBI ETO1/03	EV/ Course n	ame: Ethology				
Course type, sc Course type: L Recommended Per week: 2 / 2 Course method	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of ECT	<b>FS credits:</b> 6					
Recommended	semester/trime	ster of the cours	<b>e:</b> 1., 3.			
Course level: II						
Prerequisities:						
Conditions for a Fulfilled conditi Successfully con	course complet ions for the exer mpleted oral exa	ion: cises ım				
Learning outco To teach the stu biological scien	<b>mes:</b> idents to know ces	and to be aware	of the importa	nce of the behav	ioural aspect in	
<b>Brief outline of the course:</b> History and development of ethology. Ethological methods. The innate forms of behaviour. The simplest forms of learning – conditioning and instrumental learning. Higher form of learning. Social behaviour. Sexual behaviour. Play behaviour. Biological rhythms. Orientation in space and animal migrations. Communication systems of animals. Emotions. Aggression in animal and human behaviour. Abnormal forms of behaviour						
Recommended literature: Franck, D.: Verhaltensbiologie. Einfuhrung in die Ethologie. Georg Thieme-Verlag, 1993 Manning, A., Dawkins, M. S.: An introduction to animal behaviour. Cambridge University Press, 1992 DRICKMER, L.C., VESSEY, S.H., MEIKLE, D. Animal Behavior: mechanisms, ecology, evolution. 4th ed. Dubuque : Wm. C. Brown Publishers, 1996. Internet						
Course language:						
Notes:						
Course assessment Total number of assessed students: 1119						
А	В	C	D	Е	FX	
42.98	24.4	22.97	7.95	1.61	0.09	
Provides: RND	Provides: RNDr. Igor Majláth, PhD., RNDr. Natália Pipová, PhD.					
Date of last modification: 22.09.2023						

University: P. J	University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science					
<b>Course ID:</b> CIE EVČ/21	B/ Course na	Course name: Evolúcia človeka			
Course type, sc Course type: 1 Recommended Per week: 2 / 0 Course metho	cope and the met Lecture / Practice d course-load (h ) Per study perio d: present	thod: ours): od: 28 / 0			
Number of EC	IS credits: 4				
Recommended	semester/trimes	ster of the cours	<b>e:</b> 1., 3.		
Course level: II	- <b>-</b>				
Prerequisities:					
Conditions for	course completi	on:			
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:	Notes:				
Course assessment Total number of assessed students: 0					
А	В	С	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Martin Kundrát, PhD.					
Date of last modification: 09.02.2021					
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J.	. Šafárik Univers	ity in Košice			
Faculty: Faculty	Faculty: Faculty of Science				
Course ID: KP ZZP/12	E/ Course na	Course name: Experiential Education			
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 EC	I'S credits: 4				
Recommended	semester/trimes	ster of the cours	<b>e:</b> 1., 3.		
Course level: II					
Prerequisities:					
Conditions for	course completi	on:			
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 410					
А	В	С	D	Е	FX
44.63	37.8	13.66	3.66	0.24	0.0
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.					
Date of last modification: 12.03.2024					
Approved: prof. PhDr. Ol'ga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J. Šafár	ik University in Košice			
Faculty: Faculty of Science				
<b>Course ID:</b> ÚINF/ FO1/15	Course name: Formal languages and automata			
Course type, scope an Course type: Lecture Recommended cour Per week: 2 / 1 Per s Course method: pres	id the method: e / Practice se-load (hours): study period: 28 / 14 sent			
Number of ECTS cre	dits: 5			
Recommended semes	ter/trimester of the course: 1., 3.			
Course level: II.				
Prerequisities:				
<b>Conditions for course</b> Test and oral examina	e completion: tion.			
<b>Learning outcomes:</b> To provide theoretical knowledge in theory of	background for studying computer science in general, by giving the necessary of automata.			
Brief outline of the co 1: Pushdown automation by empty pushdown 2: Deterministic pushe 3: Context-free gramming of type A→epsilon and 4: Relation between of grammar to a pushdow 5: Pumping lemma II: 6: Pumping lemma III: 7: Closure properties of 8: Closure properties of 9: Pushdown automation practice 10: Context-sensitive gravitation 11: Closure properties 12: Recursively employed deterministic Turing ministic Turing minis	a: definition of a pushdown automaton, accepting by final states, accepting down automata: examples of application in practice hars: basic definition, leftmost derivation, derivation tree, elimination of rules d A→B, Chomsky normal form context-free grammars and pushdown automata: transforming context-free vn automaton, transforming pushdown automaton to a context-free grammar Statement of the lemma and its proof applications of the lemma of context-free languages of deterministic context-free languages ta producing an output: basic definitions and properties, applications in alanguages: context-sensitive grammar, nondeterministic linear-bounded .), transforming context-sensitive grammar to an LBA, transforming LBA to ammar of context-sensitive languages umerable languages: phrase-structure grammar, nondeterministic and nachine, transforming nondeterministic Turing machine to a phrase-structure of phrase-structure grammar to a deterministic Turing machine, closure machine ndecidable problems of the formal language theory <b>ture:</b>			

1. J.E. Hopcroft, R.Motwani, J.D. Ullman: Introduction to automata theory, languages, and computation, Addison-Wesley, 2001.

2. J. Shallit: A second course in formal languages and automata theory, Cambridge University press, 2009.

3. M. Sipser: Introduction to the theory of computation, Thomson Course Technology, 2006.

### Course language:

Slovak or English

#### Notes:

Content prerequisities:

 Basic mathematical background (proof by contradicion and by mathematical induction), basic notions from the set theory (union, intersection, complement, cartesian product).
 Basic knowledge about finite state automata and regular languages.

#### **Course assessment**

Total number of assessed students: 13

А	В	С	D	Е	FX
38.46	38.46	15.38	7.69	0.0	0.0

Provides: prof. RNDr. Viliam Geffert, DrSc., RNDr. Juraj Šebej, PhD.

**Date of last modification:** 23.11.2021

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ ZNA1/21	Course name: Foundations of knowledge systems
Course type, scope a Course type: Lectur Recommended cour Per week: 3 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 42 esent
Number of ECTS cr	edits: 4
Recommended seme	ster/trimester of the course: 2.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> Test of theoretical kn Written and oral exar	e completion: owledge in the middle of the semester. n.
Learning outcomes: The goal is to teach st in database and know	rudents some advanced applications of logic into computer science, especially redge systems.
<b>Brief outline of the c</b> 1. logic formulas, ser 2. Herbrand model, c 3. SLD-resolution an 4. logic and database 5. logic and expert sy 6. basic notions of La 7. basic notions of Fu 8. basic algorithms of 9. optimal table deco 10. intercontextual st 11. Direct products an 12. Applications on r	ourse: nantic, models and logical inference onstruction and usability d query, SLD trees s, relational databases, deductive databases stems attice Theory and Formal Concept Analysis (FCA) azzy logic and Fuzzy extension of FCA f FCA mposition, factorisation ructures, bonds and choosing of optimal bonds eal data
Recommended litera Shawn Hedman. A fi computability and co Shan-Hwei Nienhuys Springer-Verlag, ISB Kristian Kersting. Ar IOS Press, ISBN 1-55 Nilsson U., Maluszyn Bělohlávek R.: Fuzzy Plenum Publishers, N	<ul> <li>nture:</li> <li>rst course in logic: An introduction to model theory, proof theory, mplexity. Oxford university press, ISBN 0–19–852980–5, 2006.</li> <li>a-Cheng, Ronald de Wolf. Foundations of Inductive Logic Programming.</li> <li>N 3-540-62927-0, 1997.</li> <li>a Inductive Logic Programming Approach to Statistical Relational Learning, 8603-674-2, 2006.</li> <li>a Iski J.: Logic, Programming and Prolog, John Wiley &amp; Sons Ltd. 1995.</li> <li>b Relational Systems: Foundations and Principles. Kluwer, Academic/</li> <li>Jew York, 2002.</li> </ul>

Ganter B., Wille R.: Formal Concept Analysis: Mathematical Foundations, Springer Berlin, 1999.

#### **Course language:** Slovak or English Notes: content prerequisites: basics of logic, introduction to computer science **Course assessment** Total number of assessed students: 83 В С D Е FX А 55.42 2.41 7.23 18.07 13.25 3.61 Provides: doc. RNDr. Ondrej Krídlo, PhD. Date of last modification: 23.11.2021 Approved: prof. PhDr. Ol'ga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.
University: P. J	University: P. J. Šafárik University in Košice					
Faculty: Facult	y of Sc	ience				
Course ID: ÚB VMK/22	EV/	EV/ Course name: General Microbiology				
Course type, sc Course type: 1 Recommended Per week: 1/2 Course metho	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 EC	TS cre	dits: 4			_	
Recommended	semes	ter/trimes	ster of the cours	e: 3.		
Course level: II	•					
Prerequisities:						
Conditions for Attendance of examination	<b>course</b> practio	e completi cals (at le	on: east 90%), 2 wi	itten examinatio	ons during seme	ester, final oral
Learning outco Students will o their cytology, p methods for stu	o <b>mes:</b> btain b physiol dying 1	oasic infor ogy, genet microorga	mations on virus tics, ecology, clas nisms will be pro	es, prokaryotic sification, and in wided.	and eukaryotic n nportance . Infor	nicroorganisms, mation on basic
<b>Brief outline of</b> Viruses, prokar classification. T	<b>the co</b> yotic an The imp	ourse: nd eukaryc portance o	otic microorganis f microorganisms	ms, their cytolog s for humans and	gy, physiology, ge l environment.	netics, ecology,
Recommended	literat	ure:				
Course languag	ge:					
Notes:						
Course assessm Total number of	Course assessment Total number of assessed students: 235					
А		В	С	D	Е	FX
62.55	2	0.85	11.49	4.26	0.85	0.0
Provides: doc. RNDr. Peter Pristaš, CSc., RNDr. Mária Piknová, PhD., RNDr. Mariana Kolesárová, PhD., RNDr. Lenka Maliničová, PhD.						
Date of last modification: 16.12.2021						
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.						

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
<b>Course ID:</b> ÚG GEOB/22	E/ Course na	Course name: Geology			
Course type, sc Course type: 1 Recommendee Per week: 3 / 2 Course metho	cope and the met Lecture / Practice d course-load (h 2 Per study peri d: present	thod: ours): od: 42 / 28			
Number of EC	TS credits: 6				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	-				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	Course language:				
Notes:					
<b>Course assessm</b> Total number of	nent f assessed studen	ts: 304			
А	В	С	D	E	FX
26.97	32.89	27.3	9.87	2.96	0.0
Provides: doc. ]	Ing. Katarína Bói	nová, PhD.		· · ·	
Date of last modification: 30.10.2021					
<b>Approved:</b> prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prof	E. RNDr. Stanisla	av Krajči, PhD., pr	rof. RNDr.

University: P. J	. Šafárik	Univers	ity in Košice			
Faculty: Facult	y of Scie	nce				
Course ID: ÚB DGO/17	EV/ Co	/ Course name: Geology and nature protection education				
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of EC	ГS credi	ts: 2				
Recommended	semeste	r/trimes	ster of the cours	<b>e:</b> 3.		
Course level: II	•					
Prerequisities:	ÚBEV/Ľ	DIB1/03				
<b>Conditions for</b> Active particip experiment and	<b>course c</b> ation in its didac	ompleti exercis tic com	on: es. The prepara mentary at the er	tion and preser and of the course	ntation of a self- are evaluated.	planned school
experiments an learn the proceed need for nature Graduates will curriculum and methods	d modeli lures of s protectic be able to	ng of g tudent r on using o choose	eological process esearch focused o digital technolog e a suitable form	ses and phenom on the issue of en gies. for the interpreta	ena. At the same nvironmental com ation of geologica	e time, they will aponents and the and ecological
<b>Brief outline of the course:</b> Components of the environment in SEP - Specifics of didactics of geology - Environmental education in biology as part of a cross-cutting theme - Elaboration of thematic units focused on the inanimate nature and ecology in biology textbooks - Motivation of students to protect nature - Research topics for students' work - Modeling of phenomena and processes in the environment - Active involvement pupils in nature protection - Pupils' environmental projects - Educational walks and excursions						
Recommended	literatu	re:				
Course language:						
Notes:						
Course assessm Total number of	<b>lent</b> f assesse	d studen	ts: 29			
А	E	3	С	D	Е	FX
100.0	0.	0	0.0	0.0	0.0	0.0
Provides: RND	Provides: RNDr. Ivana Slepáková, PhD.					

**Date of last modification:** 05.04.2023

University: P. J. Šafár	rik University in Košice
<b>Faculty:</b> Faculty of S	cience
Course ID: KPPaPZ/PsZ/15	Course name: Health Psychology
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 sent
Number of ECTS cro	edits: 2
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> Active participation i	e completion: n seminars, preparation and presentation of seminar work, final evaluation
Learning outcomes: The aim of the course Psychology as well a of individuals and so psychology, will be f will learn to use the a	e is to provide students with the latest knowledge and background of Health s forms of its application in order to improve the mental and physical health ociety. The graduate of the course will understand the principles of health amiliar with the current social discourse on the topics covered. The student cquired knowledge in school practice.
<b>Brief outline of the c</b> 1. Health psychology 2. Mental health and 3. Physiological aspect 4. Stress. Coping, res 5. Psychosomatic disc 6. Social support and 7. Burnout syndrome 8. The meaning of life 9. Health-related beha 10. Socio-economic i	ourse: . Definition of health. Bio-psycho-social model of health. quality of life, well being. cts of mental health, lifestyle ilience. eases, placebo. its importance for health. e, faith. wior and prevention. Risky behavior, excessive use of the Internet and screens. nequalities in health. Unemployment and health.
Recommended litera Křivohlavý, J.: Psych Kebza, V.: Psychosoc Křivohlavý, J.: Psych Sarafino, E.P.: Health Taylor, E.: Health Psy Vollrath M.E.: Handb	ture: ologie zdraví. Praha: Portál, 2001 iální determinanty zdraví. Praha: Academia, 2005 ologie nemoci. Praha : Grada, 2002 Psychology: Biopsychosocial Interactions, John Wiley & Sons, 2007 ychology. Singapore: McGraw-Hill, 2006 ook of Personality and Health. Chichester: John Wiley & Sons, 2006
Course language:	
Notes:	

Course assessm Total number o	nent f assessed studen	ts: 118				
А	В	С	D	Е	FX	
100.0	100.0 0.0 0.0 0.0 0.0 0.0					
Provides: doc. ]	Provides: doc. Mgr. Mária Bačíková, PhD.					
Date of last modification: 22.06.2022						
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.						

University: P. J.	. Šafárik Univer	sity in Košice				
Faculty: Faculty	Faculty: Faculty of Science					
Course ID: ÚB SBD/08	EV/ Course n	Course name: History of Biology Seminar				
Course type, sc Course type: F Recommended Per week: 2 Pe Course metho	ope and the me Practice I course-load (I er study period d: present	thod: nours): : 28				
Number of EC	<b>FS credits:</b> 3					
Recommended	semester/trime	ster of the cours	se: 1.			
Course level: I.	, II.					
Prerequisities:						
Conditions for	course complet	ion:				
<b>Learning outco</b> Introduction to	mes: history of science	e, especially bio	logy			
Brief outline of Introduction to ages to present.	the course: history of biolog	gy (and related sc	ientific areas) fro	om ancient times,	through middle	
Recommended Magner, L.N. (2	<b>literature:</b> 2002) A history	of the life science	es. Marcel Dekke	er, Inc.		
Course languag	ge:					
Notes:						
Course assessm Total number of	ent f assessed studer	nts: 487				
А	В	С	D	Е	FX	
97.54	2.26	0.21	0.0	0.0	0.0	
Provides: prof.	Provides: prof. RNDr. Martin Bačkor, DrSc.					
Date of last mo	dification: 03.0	5.2015				
Approved: prof Ľubomír Kováč	<sup>7</sup> . PhDr. Ol'ga Or , CSc.	osová, CSc., pro	f. RNDr. Stanisla	av Krajči, PhD., p	orof. RNDr.	

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: ÚBEV/ IMU1/03Course name: Immunology					
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: 3					
Recommended semester/trimester of the course: 1.					
Course level: II.					
Prerequisities:					
Conditions for course completion: Recognition. Oral examination.					
Learning outcomes: This course introduces the students to the basic concepts of immunology as well as highlights the role and importance of immunology in various human diseases. The aim of Immunology lessons is the presentation of the organization and function of the immune system, as well as the comprehension of complex molecular and cellular interactions during the induction of immune responses.					
<b>Brief outline of the course:</b> Basic immunology: Lymphatic System Anatomy, The Innate Immune System, The Induced Responses of Innate Immunity, The Adaptive Immune Response, Antigens and Antibodies, Antigen Recognition by B-cell and T-cell Receptors, Antigen Presentation to T-lymphocytes, Complement, Clinical immunology: Allergy and other Hypersensitivities, Autoimmunity and Transplantation, Tumor Immunology, Disorders of The Immune System.					
Recommended literature: Janeway Ch. A., Travers P., Walport M., Schlomchik M.: Immunobiology. Garland Science, 2004 Murphy, K. (2012): Jeneway's Immunobiology. 8th ed. Garland Science Delves, P.J. et al. (2011): Roitt's essential immunology 12th ed Wilev-Blackwell					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1054					
A B C D E FX					
39.75 23.81 23.72 7.12 1.99 3.61					
Provides: RNDr. Vlasta Demečková, PhD., univerzitná docentka					
Date of last modification: 22.09.2023					

University: P. J. Šaf	árik Univers	ity in Košice				
Faculty: Faculty of	Science					
Course ID: ÚBEV/ IB/22	V/ Course name: Informatics in Biology					
Course type, scope Course type: Pract Recommended cou Per week: 2 Per st Course method: p	and the met ice urse-load (h udy period: resent	thod: ours): 28				
Number of ECTS c	redits: 2					
Recommended sem	ester/trimes	ster of the cours	e: 3.			
Course level: II.						
Prerequisities:						
<b>Conditions for cour</b> Elaboration of an or modeling, databases	<b>se completi</b> evaluated as	on: signment for ea	ch of the three	thematic units:	image analysis,	
Learning outcomes The graduate of the and Mathematics at	: course will b the seconda	e ready to teach th ry school.	ne optional cours	se Informatics in N	Natural Sciences	
Brief outline of the Imaging methods in of particles (eg bloo Modeling (coaching impact of vaccinat relationship) Biological database identification applic	<b>Brief outline of the course:</b> Imaging methods in biology (analysis of digital image of biological objects, detection of the number of particles (eg blood cells), measurement of lengths and areas, processing of acquired data) Modeling (coaching modeling and working with ready-made Python programs: spread of infection, impact of vaccination, cell culture growth, tumor growth, forest development, predator prey relationship) Biological databases (working with big data, data filtering, animal migration monitoring, species identification employed)					
Recommended literature: Kimáková, K. Mišianiková, A. Andrejková G.: Informatika v prírodných vedách a matematike, Zošit biológia, Centrum vedecko-technických informácií SR, Bratislava 2020, ISBN: 978-80-89965-72-4 EAN: 9788089965724						
Course language:						
Notes:	Notes:					
Course assessment Total number of assessed students: 10						
Α	A B C D E FX					
100.0	0.0 0.0 0.0 0.0 0.0					
Provides: RNDr. Ar	Provides: RNDr. Anna Mišianiková, PhD., doc. RNDr. Katarína Kimáková, CSc.					
Date of last modification: 13.05.2022						

University: P. J.	University: P. J. Šafárik University in Košice					
Faculty: Faculty	v of Science					
<b>Course ID:</b> ÚIN TIK1/22	IF/ Course na	Course name: Information theory, encoding				
Course type, sco Course type: L Recommended Per week: 2 / 1 Course method	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of ECT	<b>S credits:</b> 3					
Recommended	semester/trimes	ster of the cours	<b>e:</b> 1.			
Course level: II.						
Prerequisities:						
Conditions for of Satisfiable know	<b>course completi</b> vledge of basic n	on: lotions				
Learning outco To understand p	mes: rinciples of loss	less coding and e	entropy and their	mutual relationsh	nip.	
Brief outline of 1. Word and lan 2. Decodable co 3. Prefix-free co 4. Krafto-McMi 57. Entropy 89. Price of co 10. Shannon's th 11. Fano's code 12. Huffman's o Recommended 1 D. Hankersso	Brief outline of the course:         1. Word and language         2. Decodable codes         3. Prefix-free codes         4. Krafto-McMillan inequality         57. Entropy         89. Price of code sequence         10. Shannon's theorem         11. Fano's code sequence         12. Huffman's optimal code sequence					
<ol> <li>D. Hankersso</li> <li>Compression, C</li> <li>J. Adámek: K</li> <li>J. Černý: Entre</li> </ol>	<ol> <li>D. Hankersson, G. Harris, P. Johnson: Introduction to Information Theory and Data Compression, CRC Pr., 1998.</li> <li>J. Adámek: Kódovaní a teorie informace, Vydavatelství ČVUT, Praha 1994</li> <li>J. Černý: Entrópia a informácia v kybernetike, Alfa 1981</li> </ol>					
Course language: Slovak						
Notes:						
Course assessm Total number of	ent assessed studen	ts: 124				
A	В	С	D	Е	FX	
58.87	58.87 19.35 12.1 4.03 0.0 5.65					
Provides: prof. RNDr. Stanislav Krajči, PhD.						

**Date of last modification:** 08.02.2022

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: KPPaPZ/UPN/17	Course name: Introduction into Psychology of Religion					
Course type, scope a Course type: Practic Recommended cou Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of ECTS cr	edits: 2					
Recommended seme	ester/trimester of the course: 2.					
Course level: II.						
Prerequisities:						
Conditions for course The assessment is ba distance format. Up-t found on the electron	se completion: sed on the interim evaluation. The subject will be taught in both present and to-date information concerning the subject for the given academic year can be nic board of the subject in the Academic information system of the UPJŠ.					
Learning outcomes: The student wil acquired of research and appliant and evaluate this known orientation in the field acquired knowledge	ire a basic overview of the origin and current state of knowledge in the field cation the psychology of religion. He/she will be able to described, explaine, owlege. The student will be able to apply the acquired knowledge in the basic d, and develop critical thinking and will be able to apply and integrate already from other (psychological) distributions					
<b>Brief outline of the c</b> 1. History of psychol 2. Psychological pers 3. Psychology of reli 4. Basic approaches t 5. Different types of 6. Psychological view 7. Spirituality versus 8. Coping in the cont 9. Psychotherapy and	ourse: ogy of religion in national and world context spective on religion and religious experience gion in an interdisciplinary context to psychological interpretation and selected views religious experience w of religion from a biodromal perspective religiosity in a postmodern society text of religiosity d religion, pastoral psychology					
Recommended litera Eliade, M. (1994). Po Eliade, M. (1995). D Freud, S. (1999). Nur Praha: Psychoanalyti Fromm, E. (2003). P Erikson, E. (1996). M Psychoanalytické nal James, W. (1930). Dr Jung, C. G. (1993). A	nture: psvátné a profánní. Praha: Česká křesťanská akademie. ějiny náboženského myšlení 1. Praha: Oikoymenh. tkavá jednání a náboženské úkony. In Freud, S., Spisy z let 1906–1909. cké nakladatelství. sychoanalýza a náboženství. Praha: Aurora Aladý muž Luther: studie psychoanalytická a historická. Praha: kladatelství. ruhy náboženské zkušenosti. Praha: Melantrich. Analytická psychologie: Její teorie a praxe. Praha: Academia.					

Křivohlavý, J. (2000). Pastorální péče. Praha: Oliva Pargament, K. (1997), Psychology of religion and coping, Říčan, P. (2007). Psychologie náboženství a spirituality. Praha: Portál. Říčan P. (2002), Psychologie náboženství, Portál, Praha, Stríženec, M. (2001) Súčasná psychológia náboženstva Course language:

Notes:

### **Course assessment**

Total number of assessed students: 77

А	В	С	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0

Provides: Mgr. Jozef Benka, PhD.

### Date of last modification: 24.06.2022

University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	cience			
Course ID: ÚBEV/ VEK1/03	Course name: Introduction to Ecology			
Course type, scope a Course type: Lectur Recommended cour Per week: 3 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 42 esent			
Number of ECTS credits: 3				
Recommended seme	Recommended semester/trimester of the course: 1.			
Course level: I., II.				
Prerequisities:				
<b>Conditions for cours</b> oral examination	e completion:			

#### Learning outcomes:

Fundamental parameters and relations in ecological science. Abiotic, biotic and anthropogenic factors in air, aquatic and terrestrial/soil environment. Autecology, Demecology and Synecology. Ecosystem and Nature Protection.

#### Brief outline of the course:

Ecological factors and relations in environment (air, water, soil); influence of ecological factors on individuals (morphological adaptations, behavioral reactions); populations and communities; ecosystems (impact assessment); conservation and biodiversity.

1. Basic ecological terms. 2. Characterisation of the basic ecological factors (light, temperature, water). 3. Air environment (composition of atmosphere, physical and chemical factors, air pollutants, organisms and their adaptations in air environment). 4. Aquatic environment (water properties physical and chemical factors, gases in water, water pollutants, eutrophication and saprobity, aquatic organisms). 5. Soil environment (physical and chemical properties, soil profile, humus layer, soil pollutants, soil organisms and their adaptations). 6. Characterization of Populations, structure and ppuatin dynamics. 7.Biocenoses and biotops. 8. Qualitative and quantitative community characteristics. 9. Ecosystems. 10. Biomes and their characteristics, 11. Bidiversity-factors affecting biodiversity, Species-Area relationships. 12. Biodiversity protection.13. Biospheric cycles.

#### **Recommended literature:**

Begon, M., Harper, J. L., Townsend, C. L.: Ecology: individuals, populations, and communities. Blackwell Sci. Publ., 1990

#### **Course language:**

Notes:

Course assessment Total number of assessed students: 1825							
A B C D E FX							
20.99	20.99 17.64 24.93 17.21 11.73 7.51						
<b>Provides:</b> RNDr. Natália Raschmanová, PhD., doc. RNDr. Marcel Uhrin, PhD., univerzitný profesor							
Date of last modification: 16.03.2023							
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.							

University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	cience					
Course ID: KPPaPZ/ZMPPV/15Course name: Introduction to Research Methodoly in Education and Psychology						
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present						
Number of ECTS credits: 4						
Recommended semester/trimester of the course: 2.						

Course level: II.

**Prerequisities:** KPPaPZ/PPgU/15 and KPE/PDU/15

**Conditions for course completion:** 

- active participation in seminars, presentation of assignments in groups, final exam

### Learning outcomes:

The graduate of the course will gain information about the research methodology, will understand the basic methods of pedagogical and psychological research that can be used in the practice of the teacher. Within the seminars, students will develop professional skills through their own demonstration of a specific research method. The graduate of the course will be able to carry out simple scientific research, present the results of research and read the results of the latest research in the field of pedagogy and psychology.

#### Brief outline of the course:

Research in pedagogy and psychology. Scientific research, scientific thinking. Parts of a research project. Research planning. Topic selection, research problem formulation. Types of research plans. Hypothesis, variables, operationalization. Ethical issues of scientific research. Experiment (experiment problems, control of variables in the experiment). Experimental plans, quasi-experiment. Reliability and validity of research. Research sample, methods of sample selection. Data collection techniques - questionnaire, interview, sociometry, semantic differential, observation, tests. Introduction to qualitative methodology. Possibilities of quantitative data processing. How to write a scientific article, presentation, poster, qualification work. Interpretation of findings, integration of findings into context.

#### **Recommended literature:**

Bačíková, M., Janovská, A., Orosová, O. Základy metodológie pedagogicko-psychologického výskumu. 2.doplnené vydanie. Šafárik Press, 2019. dostupné online: https://unibook.upjs.sk/img/ cms/2019/FF/zaklady-metodologie-ped-psych-vyskumu-2-vyd-web.pdf

Gavora, P.: Úvod do pedagogického výskumu. Bratislava, UK 1999.

Švec, Š. a kol.: Metodológia vied o výchove. Bratislava, Iris 1998. Turek, I.: K základom pedagogického výskumu. Prešov, KPÚ 1991.

Ferjenčík, J.: Úvod do metodológie psychologického výskumu. Praha, Portál 2000. http://www.e-metodologia.fedu.uniba.sk/

### Course language:

Notes:							
Course assessment							
ABCDEFX							
19.44	26.81	24.86	19.72	9.03	0.14		
Provides: doc. 1	Provides: doc. Mgr. Mária Bačíková, PhD., PhDr. Anna Janovská, PhD.						
Date of last modification: 24.06.2022							
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.							

University: P. J. Šafárik University in Košice							
Faculty: Faculty	Faculty: Faculty of Science						
<b>Course ID:</b> ÚIN UGR1/15	NF/ Course na	me: Introduction	to computer gra	aphics			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present							
Number of EC	<b>FS credits:</b> 5						
Recommended	semester/trimes	ter of the course	e: 1., 3.				
Course level: I.	, II.						
Prerequisities:							
Conditions for	course completi	on:					
<b>Learning outco</b> To provide the graphics.	mes: students with kno	owledge of graph	nics algorithms a	and basic princip	les of computer		
Graphics hardw drawing 2D pri spline forms, Be perspective and Rendering tech computer anima	are, input and out mitives. Filling a ézier curves, B-sp d parallel projec miques, photore ation, virtual real	put devices. Colo nd clipping. Cur plines, surfaces. I tions. Visible-su alism, textures, ity.	or models, palette ve modeling, int Homogenous coo rface determina ray tracing, rae	es. Raster graphic erpolations and ordinates, affine t tion, illuminatio diosity. Object	es algorithms for approximations, transformations, on and shading. representations,		
<b>Recommended</b> FOLEY, J. D., v Practice, Addise MORTENSON	<b>Recommended literature:</b> FOLEY, J. D., van DAM, A., FEINER, S., HUGHES, J.: Computer Graphics: Principles and Practice, Addison-Wesley, 1991 MORTENSON M.E.: Geometric modeling 2 ed. Willey 1997						
Course languag	ge:						
Notes:							
Course assessment Total number of assessed students: 326							
А	В	С	D	Е	FX		
12.58 10.12 13.8 23.62 32.21 7.67							
Provides: RNDr. Rastislav Krivoš-Belluš, PhD., doc. RNDr. Jozef Jirásek, PhD.							
Date of last mo	dification: 08.01	.2022					
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.							

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚINF/ LOP1/15	Course name: Logic programming
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of ECTS cr	edits: 5
Recommended seme	ster/trimester of the course: 2., 4.
Course level: I., II.	
Prerequisities:	
<b>Conditions for cours</b> Evaluation of active j the semester. Written	e completion: participation in exercises and homework, test of theoretical knowledge during and oral exam together with assessment from exercises.
Learning outcomes: To learn bases of decl and basic methods of	arative programming (as complementary method to procedural programming) implementations of logic programming languages.
<b>Brief outline of the c</b> 1. Introduction to log 2. theory, models, He 3. SLD resolution 4. Basics of Prolog la 5. Prologue in examp 6. Lists 7., 8., 9. Data analysi 10., 11., 12. Graph th	ourse: ic erbrand model inguage iles s in Prolog ieory in Prolog
Recommended litera BRATKO, Ivan. Prol Wesley, 1990. ISBN NILSON U., MALU NIENHUYIS-CHEN Springer-Verlag, 199	og. Programming for Artificial Intelligence. 2 ed. Wokingham: Addison- 0-201-41606-9. SINSKI J.: Logic, Programming and Prolog, John Wiley & Sons Ltd. 1995 G Sh.H., WOLF R.: Foundations of Inductive Logic Programming, 7
Course language: Slovak or English	
Notes: Prerequisites: none	

Course assessm Total number o	nent f assessed studen	ts: 318					
A B C D E FX							
24.53 13.52 15.09 22.33 22.64 1.89							
Provides: doc. RNDr. Ondrej Krídlo, PhD.							
Date of last modification: 23.11.2021							
Approved: pro Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., pro	f. RNDr. Stanisla	w Krajči, PhD., p	rof. RNDr.		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	Science
<b>Course ID:</b> ÚINF/ STU1/16	Course name: Machine learning
Course type, scope a Course type: Lectu Recommended cou Per week: 2 / 2 Per Course method: pro	and the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of ECTS cr	edits: 5
Recommended seme	ester/trimester of the course: 2.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> The realization of a practical tasks. Succe learning, classification on machine learning,	se completion: project focused on the application of machine solution methods in solving essful completion of two written tests based on machine learning, probabilistic on tasks. Successful completion of the written and oral part of the exam based , probabilistic learning, classification tasks.
Learning outcomes: The result of education will gain the ability intelligence. Can wo	on is an understanding of the basic principles of machine learning. The student to analyze data using selected methods of machine learning and artificial rk with a selected tool for modeling neural networks.
<ul> <li>Brief outline of the of 1. Learning algorithm numbering.</li> <li>2. Boolean formulas representation.</li> <li>3. Probabilistic learn and credibility.</li> <li>4. Probabilistic learn 5. Relationships betwithe least squares met 6. Linear modeling, g Classification.</li> <li>7. Linear modeling ut 8. VC (Vapnik - Cerv 9. Bayesian approach 10. Clustering.</li> <li>11. Hidden Markov 11.</li> </ul>	course: ns, concepts, hypotheses. Training and learning, learning by construction and and their representation. Learning algorithms for monocells. Hypothesis space ing. An estimate of the number of examples needed to achieve some accuracy ing and consistent algorithms. veen attribute sets and predicted variables. Regression. Linear modeling using hod of deviations. generalization, nonlinear responses from a linear model, data validation. using probability theory and maximum confidence. vonenkis) dimension of its relation to perceptrons. h to learning. SVM. models.
Recommended litera 1. ANTHONY, Mart University Press, 199 2. BROWNLEE, Jas	ature: in a Norman BIGGS. Computational Learning Theory, Cambridge 97. ISBN 978-0521599221. on. Machine Learning Mastery With Python. 2019.

3. WATT, Jeremy, Reza BORHANI a Aggelos K. KATSAGGELOS. Machine learning refined: foundations, algorithms, and applications. Cambridge: Cambridge University Press, 2016. ISBN 978-1-107-12352-6.

### **Course language:**

Slovak language or English language

### Notes:

### Course assessment

Total number of assessed students: 61

А	В	С	D	Е	FX
36.07	18.03	27.87	9.84	8.2	0.0

**Provides:** doc. RNDr. Ľubomír Antoni, PhD., doc. RNDr. Gabriela Andrejková, CSc., RNDr. Zoltán Szoplák, RNDr. Šimon Horvát, PhD.

### **Date of last modification:** 31.03.2022

University: P. J.	Šafárik Univers	sity in Košice						
Faculty: Faculty	Faculty: Faculty of Science							
Course ID: ÚIN MLO/22	Course ID: ÚINF/ Course name: Mathematical logic MLO/22							
Course type, sco Course type: Le Recommended Per week: 2 / 2 Course method	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present							
Number of ECT	S credits: 5							
Recommended s	emester/trime	ster of the cours	e: 1.					
Course level: II.								
Prerequisities:								
Conditions for c Knowledge of st	ourse complet adied notions v	<b>ion:</b> vill be evaluated.						
Learning outcon Understanding of	nes: f basic concept	s of mathematical	logic.					
Brief outline of t 12. Boolean al 34. Filters and 56. Rasiowa-S 7. Safe substituti 8. Lindenbaum-T 911. Syntactica 12. Completenes	Brief outline of the course:         12. Boolean algebra         34. Filters and ultrafilters         56. Rasiowa-Sikorski's theorem         7. Safe substitution         8. Lindenbaum-Tarski's algebra         911. Syntactical interpretation         12. Commutateness							
Recommended literature: 1. Krajči S., https://ics.upjs.sk/~krajci/skola/vyucba/ucebneTexty/logika-stromy.pdf 2. Goldstern M., Judah H.: The Incompleteness Phenomenon, A New Course in Mathematical Logic, A K Peters, Wellesley, Massachusetts, 1995								
Course language: Slovak								
Notes:								
Course assessment Total number of assessed students: 9								
A B C D E FX								
33.33 11.11 11.11 22.22 22.22 0.0								
Provides: prof. RNDr. Stanislav Krajči, PhD.								
Date of last mod	Date of last modification: 12.11.2021							

University: P. J. Šafá	rik University in Košice
<b>Faculty:</b> Faculty of S	cience
Course ID: ÚFV/ MDT/19	Course name: Modern Didactical Technology
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 2.
Course level: II.	
Prerequisities:	
Conditions for course Summary evaluation 1. Active participati participation. 2. Practical ongoing a assignment elaborate	e completion: based on ongoing assessment: on at the seminars (in the contact or online form) with minimum 80% assignments (10) and their defense. At least 50% must be obtained from each d according to assessment criteria.
Learning outcomes: Student graduated fro - recognize current av - to use all types of au - to design and realized	om subject will be able: vailable digital tools and their parameters for educational activities, ctual digital tools in education of science or humanities, e educational activities by using the modern technologies.
<b>Brief outline of the c</b> 00. Introduction - goa 01. Modern hybrid cl 02. Digital learning s 03. Cloud repositorie 04. Cloud editors for 05. Digital text (scan 06. Digital image and 07. Interactive E-voti 08. Digital collaborat 09. Virtual and digita 10. Education video ( 11. Smartphone and t 12. Teaching tools an	ourse: als and didactic principles assroom in 21st century paces in 21st century s, services, modern web-browser notes, texts, spreadsheets and presentations , OCR, voice recognition, Kami pdf) l audio (digital recording and editing) ng and videoconference systems in education ive technologies (social e-reader, collaborative whiteboard) lly based experiments, digital databases (digital recording and editing) ablet in classic and blended education d digital teacher's workspace
Recommended litera 1. Kireš, M. et al.: M 2 . Redecker, C., & P Educators: DigComp	iture: odern didactical technics in teacher practice (in Slovak), Košice: Elfa, 2010 unie, Y. (2017). European Framework for the Digital Competence of Edu. Luxembourg: Publications Office of the European Union.

3. C. R. Tucker, T. Wycoff, J. T. Green, Blended Learning in Action: A Practical Guide Toward Sustainable Change. Thousand Oaks: Corwin Press, 2016.

4. D. Bannister, Guidelines on Exploring and Adapting: LEARNING SPACES IN SCHOOLS. Brussels: European Schoolnet, 2017.

5. current information from web sites related to didactical technologies,

catalogues of teaching tools,

current articles about modern trends in science and humanities education.

### Course language:

Slovak, English

## Notes:

## Course assessment

Total number of assessed students: 99

А	В	С	D	Е	FX
53.54	29.29	12.12	3.03	2.02	0.0

Provides: doc. RNDr. Jozef Hanč, PhD.

**Date of last modification:** 07.07.2022

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
<b>Course ID:</b> KP PDK/17	Course ID: KPE/       Course name: Pedagogical Communication         PDK/17       PDK/17					
Course type, sc Course type: 1 Recommended Per week: 2 P Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28				
Number of EC	TS credits: 2					
Recommended	semester/trimes	ster of the cours	e: 1.			
Course level: II	-					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:						
<b>Course assessm</b> Total number of	nent f assessed studen	ts: 179				
А	В	С	D	E	FX	
75.98	75.98 22.35 1.68 0.0 0.0 0.0					
Provides: Mgr. Katarína Petríková, PhD.						
Date of last mo	dification: 12.03	3.2024				
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Oro , CSc.	osová, CSc., prof	. RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.	

University: P. J	University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science					
Course ID: KP PDD/17	E/ <b>Course na</b>	Course name: Pedagogical Diagnostics			
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of EC	Number of ECTS credits: 2				
Recommended	semester/trimes	ster of the cours	<b>e:</b> 2.		
Course level: 11.					
Prerequisities:					
Conditions for course completion:					
Learning outcomes:					
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessment Total number of assessed students: 86					
А	В	С	D	Е	FX
83.72	11.63	4.65	0.0	0.0	0.0
Provides: Mgr. Beáta Sakalová					
Date of last modification: 12.03.2024					
Approved: prof. PhDr. Oľga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

Dytrtová, R., Krhutová, M. Učitel. Příprava na profesi. Praha: Grada, 2009. Kalhous, Z. – Obst, O. 2002. Školní didaktika. Praha: Portál, 2002. Petlák, E.: Kapitoly zo súčasnej didaktiky. Bratislava: IRIS, 2005. Prucha, J.: Moderní pedagogika. Praha: Portál, 2012. Turek, I.: Didaktika. Bratislava: Wolters Kluwer, 2014. Vališová, A., Kasíková, H.: Pedagogika pro učitele. Praha: Grada, 2010. Zormanová, L.: Obecná didaktika. Praha: Grada, 2014.

### **Course language:**

Notes:

### Course assessment

Total number of assessed students: 10

А	В	С	D	Е	FX
10.0	70.0	10.0	10.0	0.0	0.0

**Provides:** 

Date of last modification: 12.03.2024

University: P. J. Šaf	ărik University in Košice		
Faculty: Faculty of	Science		
Course ID: KPE/ PPD/22	ID: KPE/ Course name: Pedagogy and Psychology		
Course type, scope Course type: Recommended co Per week: Per stu Course method: p	and the method: urse-load (hours): dy period: resent		
Number of ECTS credits: 2			
Recommended semester/trimester of the course:			

Course level: II.

**Prerequisities:** KPE/PDU/15 and KPPaPZ/PPgU/15

**Conditions for course completion:** 

Obtaining the required number of credits in the prescribed composition by the study plan.

#### Learning outcomes:

The student is able to demonstrate the acquired competencies in accordance with the profile of the graduate.

### Brief outline of the course:

Pedagogy: 1. Pedagogy, basic pedagogical categories, system of pedagogical scientific disciplines. 2. Education, pages and functions of education, educational process, self-education.3. Factors of education, educated individual, pedagogue, pedagogical profession, professional competencies.4. School education, family education. 5. Educational goals, taxonomy, requirements, classification of educational goals.6. Methods of education. 7. Pedagogical principles. 8. School system of the Slovak Republic. 9. Didactics, basic questions of didactics, current starting points of didactics. 10. Objectives of the teaching process, the teacher's work with the objectives of teaching.11. Content of education, basic curriculum, extension curriculum, elements and components of curriculum. 12. Assessment in school education, types, functions and criteria of assessment.13. Pedagogical control, methods and forms of pedagogical control.14. Teacher's work planning, written preparation of the teacher for teaching.15. Teaching process, stages of the teaching process and their didactic functions.16. Organizational forms of teaching, lesson, stages, types of lessons.17. Teaching methods, classification, functions, selection of teaching methods. 18. Didactic principles of the teaching process. 19. Basic pedagogical documents, textbook, functions and structural components of the textbook.20. Current concepts of the teaching process.

Psychology: 1.Psychology as a science, goals and subject of psychology in terms of influential psychological directions.2.Pedagogical psychology in teacher training, its subject, function.3.Psychology in school practice: professional forms of control and assistance, psychological examination, counseling process. Crisis intervention. Code of ethics.4.Psychology in school practice: approaches and models of prevention, prevention spectrum, protective and risk factors of risk behavior of schoolchildren in the context of the theory of triadic influence.5.Psychology in school practice: effective strategies for prevention of substance use.6.Psychology of education from the point of view of psychodynamic approach (Psychoanalysis and Individual Psychology) .7.Psychology of education from the point of

view of humanistic psychology.8.Psychology of education from the point of view of cognitive psychology.9.Psychology of learning and types of learning supplemented by examples from school practice. / success in the context of individual theories of cognitive development.11. Nutritional peculiarities, school non-success / intelligence in terms of intelligence.12. Memory and developmental peculiarities, school non-success 13. Attention and developmental peculiarities, school non / success peculiarities of individual types of family, educational styles.15.Social relations at school, me modes of cognition of interaction U and Ž. Psychosocial climate of school class and school, methods of cognition, sociometry.16.Social influence: presence of others, interpersonal influences and meaningful understanding of social influence in teacher's work.17.Teacher as a professional, his professional ability, teaching style, attitudes towards students, expectations towards students, coping with stress, burnout syndrome.18.Students: gifted and talented, school failure, non-thriving pupils and failing pupils, pupils' self-efficacy.19. Types of research plans and their creation (setting goals, hypotheses, variables, selection of research sample) in the context of pedagogical-psychological research.20. Selected methods of pedagogicalpsychological research - questionnaire, interview, observation and possibilities of their use in school practice.

### **Recommended literature:**

Pedagogika:

Čapek, R.: Moderní didaktika. Praha: Grada, 2016.

Dytrtová, R., Krhutová, M. Učitel. Příprava na profesi. Praha: Grada, 2009.

Kalhous, Z. – Obst, O. 2002. Školní didaktika. Praha: Portál, 2002.

Petlák, E.: Kapitoly zo súčasnej didaktiky. Bratislava: IRIS, 2005.

Prucha, J.: Moderní pedagogika. Praha: Portál, 2012.

Turek, I.: Didaktika. Bratislava: Wolters Kluwer, 2014.

Vališová, A., Kasíková, H.: Pedagogika pro učitele. Praha: Grada, 2010.

Zormanová, L.: Obecná didaktika. Praha: Grada, 2014.

Psychológia:

Mareš, J.: Pedagogická psychologie. Praha : Grada 2013.

Mareš, J., & ČÁP, J.: Psychologie pro učitele. Praha: Portál, 2001.

Džuka, J.: Základy pedagogickej psychológie. Prešov: UK 2003.

Orosová, O. a kol: Psychológia a pedagogická psychológia 1. Košice: UPJŠ, 2005.

Orosová, O. a kol.: Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ 2012.

Bačíková, M., Janovská, A. (2019). Základy metodológie pedagogicko-psychologického

výskumu. Sprievodca pre študentov učiteľstva. 2. rozšírené vydanie. Šafárik press, Košice.

Gavora, P. a kol. (2010). Elektronická učebnica pedagogického výskumu. Bratislava: Univerzita Komenského, 2010. dostupné online na www. e-metodologia. fedu. uniba. sk.

Vágnerová, M.: Základy psychológie. Praha : Karolinum 2005.

Vágnerová, M.: Vývojová psychológie. Praha : Karolinum 2005.

Vágnerová, M.: Škoní podadenská psychologie pro pedagogy. Praha : Karolinum 2005. Výrost,

J., Slaměník, I.: Sociální psychologie. Praha : Grada 2008.

Výrost, J., Salměník, I.: Aplikovaná sociální psychológie I. Praha: Portál 1998.

Strana: 2

Fontana, D. : Psychologie ve školní praxi. Praha: Portál 1997.

Zelina, M.: Stratégie a metódy rozvoja osobnosti. Bratislava, Iris: 1996.

Křivohlavý, J.: Pozitívni psychologie. Praha: Portál 2004.

Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003.

### Course language:

Notes: Course assessment					
					Total number of
А	В	С	D	Е	FX
18.84	34.78	30.43	14.49	1.45	0.0
Provides:					
Date of last modification: 12.03.2024					
Approved: prof. PhDr. Ol'ga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.					

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
<b>Course ID:</b> ÚBEV/ FG1/03	/ Course name: Phytogeography		
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 1 Per Course method: pre	and the method: re / Practice rse-load (hours): study period: 28 / 14 esent		
Number of ECTS credits: 5			
<b>Recommended semester/trimester of the course:</b> 1., 3.			

Course level: I., II.

Prerequisities:

### **Conditions for course completion:**

1. Lectures are optional, but highly recommended due to the presentation of otherwise difficult-toaccess information and its synthesis.

2. In addition to the exam, the student must complete a mandatory 5-hour field trip focusing on the aspects that determine the spread of plants on Earth, solve practical tasks from the topic of the subject and prepare a semester presentation on the given topic, the presentation is defended at a scientific mini-conference.

#### Learning outcomes:

After completing the subject, the student is oriented in various aspects of phytogeographic issues and can apply the acquired knowledge both in basic research within chorology, historical and regional phytogeography, as well as in the evaluation of world biomes. The practical application of the subject is within the study of geographically and climatically conditioned changes in vegetation, in the assessment of the reduction of biodiversity and the extinction of the natural plant communities of the Earth, and the acquired knowledge can be used in work in environmental protection.

#### **Brief outline of the course:**

- 1. History of the subject. Plants and environment. Dynamics of the earth's surface.
- 2. Abiotic and biotic factors of the plant environment.
- 3. Chorology, range, areal disjunctions, relics, endemism, vicarism.
- 4. Elements of flora older and newer approaches.
- 5. Main features of florogenesis. Paleozoic, Mesozoic, Cenozoic.
- 6. Main features of florogenesis. Cenozoic Pleistocene, Holocene.
- 7. Basics of GIS (geographic information systems) and their use in botanical research.
- 8. Postglacial development of vegetation in Slovakia.
- 9. Current changes in terrestrial vegetation and their study, plant invasions.
- 10. Geography of vegetation: from tropical rainforests to tundra I.
- 11. Geography of vegetation: from tropical rainforests to tundra II.
- 12. Geographical origin of cultivated plants.

Seminars and exercises consist of a 5-hour excursion focusing on the connections and conditionality of plant distribution and indoor exercises focusing on an overview of phytogeographical literature, atlases of plant distribution and their importance, types of mapping, types of areas, practical
assessment of floristic elements and types of disjunctions, work with maps of specific taxa throughout Europe. Further: regional phytogeography of the Earth, historical overview of opinions on the phytogeographical (floristic) division of Slovakia. Plant phylogeography. Student presentations of final semester theses (phytogeographical mini-conference).

#### **Recommended literature:**

Hendrych R.: Fytogeografie. - SPN, Praha 1984.

Prach K., Štech M., Říha P.: Ekologie a rozšíření biomů na Zemi. - Scientia, Praha 2009. Krippel E.: Postglaciálny vývoj vegetácie Slovenska. – Veda, vyd. SAV, Bratislava, 1986.

Dahl, E.: The Phytogeography of Northern Europe, - Cambridge University Press, 2007.

Brown J. H., Lomolino M. V.: Biogeography. - Sinauer Associates, Sunderland, 1998.

Myers A. A., Giller P. S.: Analytical Biogeography. - Chapman & Hall, 1990.

Various literature devoted to the geography of vegetation (mainly nature and travel), articles in National Geographic, Živa, Vesmír and other magazines.

#### **Course language:**

Notes:

#### Course assessment

Total number of assessed students: 400

А	В	С	D	Е	FX
38.5	22.25	21.25	8.75	8.5	0.75

Provides: prof. RNDr. Pavol Mártonfi, PhD., Mgr. Vladislav Kolarčik, PhD., univerzitný docent

Date of last modification: 24.07.2022

University: P. J. Šafa	arik University in Košice
Faculty: Faculty of S	Science
Course ID: ÚINF/ PDSI2/22	<b>Course name:</b> Pro-seminar to diploma thesis in informatics
Course type, scope a Course type: Practi Recommended cou Per week: 1 Per stu Course method: pr	and the method: ice irse-load (hours): ady period: 14 resent
Number of ECTS ci	redits: 1
Recommended seme	ester/trimester of the course: 1.
Course level: II.	
Prerequisities:	
Conditions for cour Conditions for cour Conditions for ongot 1. Analysis of the im 2. Analysis of select 3. Analysis of select 4. Analysis of a select Conditions for the fi 1. Creation of a thes 2. Creation of an over 3. Creation and press Conditions for succe Fulfillment of all ong <b>Learning outcomess</b> The student will get and life cycle).	se completion: ing evaluation: formatics curriculum of a selected country. ed contributions of educational journals. ed papers of conference proceedings. cted educational project. nal evaluation: is assignment (title, objectives, literature, supervisor). erview of the current state of the studied issue. entation of the thesis website. essful completion of the course: going and final assignments. an idea of a thesis focused on the teaching of informatics (its types, structure
The student actively conference proceeding The student gains and as the teaching of cu The student will cre topic of the master th	exploit educational information resources (publication databases, journals and ngs, educational projects). overview of the content of informatics teaching at home and abroad, as well rrent topics in informatics. ate an overview of the current state of teaching issues related to the selected hesis.
<ul> <li>Brief outline of the of the ses for theses).</li> <li>2. Analysis of select</li> <li>3. Overview of inference of the ses, journals a</li> <li>4. Study and analysis</li> <li>5. Study and analysis</li> <li>OMFI, sciED).</li> </ul>	<b>course:</b> used on teaching informatics (types of theses, structure of thesis, life cycle of ed theses on teaching informatics (CRZP). ormation resources (curricula of informatics abroad, available publication ind conference proceedings, educational projects). s of informatics curricula in selected countries (CSTA, UK, Czech Republic). s of selected papers of educational journals (INFEDU, C&E, JTIE, ICTE, MFI,

6. Study and analysis of selected papers of educational journals (INFEDU, C&E, JTIE, ICTE, MFI, OMFI, sciED).

7. Study and analysis of selected papers of conference proceedings (DidInfo, ISSEP, EduLearn, MIPRO, ICETA).

8. Study and analysis of selected conference proceedings (DidInfo, ISSEP, EduLearn, MIPRO, ICETA).

9. Study and analysis of selected educational projects (NP ITA, ĎVUi, PRIM, eTwinning).

10. Study and analysis of selected educational projects (NP ITA, ĎVUi, PRIM, eTwinning).

11. Creation of a diploma website with an overview of the current state of the topic of the diploma thesis.

12. Creation of a diploma website with an overview of the current state of the topic of the diploma thesis.

#### **Recommended literature:**

MEŠKO, Dušan, Dušan KATUŠČÁK and Ján FINDRA, 2013. Akademická príručka: Chcete byť úspešní na vysokej škole? 3. vydanie. Osveta, 495 pp. ISBN 9788080633929.

KATUŠČÁK, Dušan, 2013. Ako písať záverečné a kvalifikačné práce. Enigma, 162 pp. ISBN 8089132454.

COMPUTER SCIENCE TEACHERS ASSOCIATION. Home Page

Computer Science Teachers Association [online]. [cited 2021-7-30]. Available from: https://www.csteachers.org/

ASSOCIATION FOR COMPUTING MACHINERY. The ACM Digital Library [online]. [cited 2021-7-30]. Available from: https://dl.acm.org/

SPRINGER NATURE SWITZERLAND AG. Home - Springer [online]. [cited 2021-7-30]. Available from: https://link.springer.com/

BAČÍKOVÁ, Mária, Anna JANOVSKÁ and Oľga OROSOVÁ, 2019. Základy metodológie pedagogicko-psychologického výskumu: Sprievodca pre študentov učiteľstva [online]. 2. doplnené vydanie. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 195 pp. [cited 2021-7-29]. ISBN 978-80-8152-805-7. Available from: https://unibook.upjs.sk/sk/filozoficka-fakulta/1266-zaklady-metodologie-pedagogicko-psychologickeho-vyskumu-sprievodca-pre-

studentov-ucitelstva

Informatics in Education. Vilnius University Institute of Data Science and Digital Technologies. ISSN 2335-8971 (online). Also available from: https://infedu.vu.lt/journal/INFEDU

Matematika–fyzika–informatika. Praha: PROMETHEUS. ISSN 1805-7705. Also available from: http://www.mfi.upol.cz/index.php/mfi/index

UNIVERZITA MATEJA BELA V BANSKEJ BYSTRICI, TECHNICKÁ UNIVERZITA V LIBERCI, 2021. Zborníky medzinárodnej konferencie DidInfo (od roku 2011) [online]. [cited 2021-7-30]. Available from: http://www.didinfo.net/minule-rocniky

CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. Centrálny register záverečných a kvalifikačných prác [online]. [cited 2021-7-30]. Available from: https://cms.crzp.sk/

#### Course language:

Slovak and partly English due to selected information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

Course assessment	
Total number of assessed students: 5	
abs	n
100.0	0.0
Provides: doc. RNDr. Ľubomír Šnajder, PhD.	
Date of last modification: 08.02.2022	
Approved: prof. PhDr. Oľga Orosová, CSc., p Ľubomír Kováč, CSc.	rof. RNDr. Stanislav Krajči, PhD., prof. RNDr.

Faculty: Faculty of Science				
Course ID: KPPaPZ/PASZ/17Course name: Problem and Aggressive Behaviour of Pupils. Etiology, Prevention and Intervention.				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present				
Number of ECTS credits: 2				
Recommended semester/trimester of the course: 2.				
Course level: II.				
Prerequisities:				
Conditions for course completion:				
Learning outcomes:				
General principles of mental development as a basis for recognizing mental disorders in children and adolescents. Etiology of mental disorders and developmental disorders in children and adolescents. Definition of aggressive behavior. Concepts of aggression vs. aggressiveness. Theoretical approaches to aggression. Causes and factors of aggressive behavior. Violence at school and in the family. Bullying. Psychology of problem students. Problems resulting from disturbed behavior. Problems arising from group relationships. Adolescent lifestyle issues. Problems resulting from impaired emotional experience. Solving problematic and aggressive behavior in the school environment. School classroom management, group preventive and intervention work with the classroom. Crisis intervention. Work with parents of problem students. Principles of interviewing a parent. Cooperation with other experts. Prevention of aggressive and problematic behavior at school. Classroom and school climate, school prevention programs. Viac o tomto zdrojovom texteNa získanie d'alších informácií o preklade sa vyžaduje zdrojový text Odoslať spätnú väzbu Bočné panely				
Recommended literature:				
Course language:				
Notes:				
Course assessment Total number of assessed students: 121				
A B C D E FX				
79.34 14.88 5.79 0.0 0.0 0.0				
Provides: PhDr. Anna Janovská, PhD.				
Date of last modification: 24.06.2022				

	COURSE INFORMATION LETTER
University: P. J. Šafán	rik University in Košice
Faculty: Faculty of S	cience
Course ID: KPPaPZ/KPE/ EPU/15	Course name: Professional Ethics for Teachers and School Counsellors
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce cse-load (hours): dy period: 28 csent
Number of ECTS cro	edits: 2
Recommended semes	ster/trimester of the course: 2., 4.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> 1. Active participation Preparation (descripti during the semester, t 77 - 86, C 69 - 76, D 6 of the course in AIS2	e completion: n in seminars (max. 1 absence) - 30p, 2. Preparation for the seminar - 40p, 3. on and analysis) of the moral dilemma - 30p. By summing the points obtained the student obtains the final evaluation according to the scale: A 87 - 100, B 51 - 68, E 56 - 60, FX 55 and less. Detailed information in the electronic board . The teaching of the subject will be realized by a combined method.
Learning outcomes: The student will und counselor as one of the the ethical and moral (including the formula the function of the ed and solve practical m professional skills of context thanks to the	lerstand the principles of teacher ethics and the ethics of the educational he branch types of professional ethics. The student can theoretically reflect on issues of the teaching profession and the function of the educational counselor ation of moral values, principles and standards of the teaching profession and ducational counselor in the form of codes of ethics). He is able to analyze noral problems in pedagogical practice, which supports the development of students. The student is able to critically evaluate situations with a moral opportunity to discuss moral and ethical issues in an open way.
<b>Brief outline of the c</b> Moral emotions (theo their manifestations) Development of mora (Piaget, Kohlberg, Gi Moral behavior (from intelligence in the wo Possibilities of exan conformity, obedience judgment) Morality and profess of ethics Professional ethics of of teacher ethics) and	ourse: bries of emotion, the center of emotions in the brain, types of emotions and al reasoning, cognitive approaches to moral reasoning and their comparison lligan, Eisenberg, Selman, Lind), a the point of view of learning theories) and moral (vs. social and emotional) rk of a teacher nining moral behavior and judgment (socio-psychological research of e, aggression and psychodiagnostic approaches to the determination of moral ional ethics in general (ethical principles in helping professions) and codes the teacher and educational counselor (terminology, concepts, main principles teacher ethics codes

Moral dilemmas and ways of solving them, MD of teaching practice

Possibilities of influencing and stimulating moral judgment, use of moral dilemma in education Cheating and other unethical manifestations in the school environment, ethics and etiquette of final exams

#### **Recommended literature:**

Ráczová, Babinčák, P. Základy psychológie morálky. Košice : Equilibria, 2009. - 130 s. ISBN 9788070977866 (brož.).

Gluchmanová, M. K niektorým terminologickým otázkam učiteľskej etiky. Pedagogická orientace 2007, č. 2, s. 11–25. ISSN 1211-4669.

Malankievičová, S. Profesijná etika: FF PU. 2008.

Miezgová J., Vargová, D. Etika. SPN Mladé letá 2007.

Remišová A. Dejiny etického myslela v Európe a USA. Bratislava, Kalligram 2008.

Zelina, M. Teória výchovy alebo hľadanie dobra. Bratislava SPN 2010.

Gluchmanová, M. Uplatnenie princípov a hodnôt etiky sociálnych dôsledkov v učiteľskej etike. Prešov: FF PU,2009. 222 s. ISBN 978-80-555-0042-3

Campbell, E. The Ethical Teacher. Berkshire (England): Open University Press, 2003. 178 s. ISBN 03-3521-219-0.

#### Course language:

slovak

#### Notes:

#### Course assessment

Total number of assessed students: 496

А	В	С	D	Е	FX
96.98	2.62	0.4	0.0	0.0	0.0

Provides: Mgr. Lucia Barbierik, PhD.

Date of last modification: 24.06.2022

University: P. J. Šaf	ărik University in Košice
Faculty: Faculty of	Science
<b>Course ID:</b> ÚINF/ JAC1/15	Course name: Programming language C
Course type, scope Course type: Pract Recommended cou Per week: 2 Per st Course method: p	and the method: ice urse-load (hours): udy period: 28 resent
Number of ECTS c	redits: 2
Recommended sem	ester/trimester of the course: 1., 3.
Course level: I., II.	
Prerequisities:	
<b>Conditions for cour</b> Practics attendance Final project.	rse completion: and activity. Home assigment
Learning outcomes The student will gai is the primary system components, as well from the simple lang in the management	: n the ability to create source code files in the C programming language, which m programming language used in the creation of operating systems and system as firmware for embedded devices. The aim of the exercise is to guide students guage constructs to a full understanding of working with pointers and their use of static and dynamic memory.
<ul> <li>Brief outline of the</li> <li>1. Short overview of</li> <li>execution.</li> <li>2. Variables and dat</li> <li>3. Cycles, condition</li> </ul>	<b>course:</b> f language history, explanation of terms, code compilation, linking and program a types, unary, binary and ternary operations, operator precedence. Is. Structures, unions and enumerators.
<ol> <li>4. Functions.</li> <li>5. Pointers - concep</li> <li>6. Fields - principle</li> <li>7. Dynamic memory</li> <li>8. N-dimensional fields</li> <li>9. Text strings.</li> <li>10. Input and output</li> <li>11. Dynamic fields</li> <li>12. Basic operations</li> <li>13. Pointer to a funct</li> <li>14. Compiling a pro-</li> </ol>	t, implementation, pointer arithmetic. , implementation. y allocation. elds and pointers. t, command line arguments, process return codes. and structures. s with regular files. ction. ogram from source code using the "make" utility.
Recommended liter 1. KERNIGHAN, E 2006. ISBN:802510 2. PR ATA_Stephen	<b>Stature:</b> Brian W., Dennis M. RITCHIE. Programovací jazyk C. Brno: Computer Press, 0897X. C. Primer Plus, 6th Edition, Addison-Wesley Professional, 2014, ISBN

2. PRATA, Stephen. C Primer Plus. 6th Edition. Addison-Wesley Professional, 2014. ISBN 9780321928429.

# 3. SEACORD, Robert C. Effective C: An Introduction to Professional C Programming. San Francisco, United States: No Starch Press, 2020. ISBN 9781718501041.

#### **Course language:**

Slovak or English

#### Notes:

#### Course assessment

Total number of assessed students: 268

А	В	С	D	Е	FX
38.06	19.78	14.55	14.93	8.96	3.73
Provides: RNDr. PhDr. Peter Pisarčík, Mgr. Patrik Pekarčík					

Date of last modification: 08.10.2021

University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science				
<b>Course ID:</b> KPPaPZ/PPgU/15	Course name: Psychology and Educational Psychology				
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent				
Number of ECTS cro	edits: 5				
Recommended seme	ster/trimester of the course: 1.				
Course level: II.					
Prerequisities:					
<b>Conditions for cours</b> Combined method. Assessment Maximum Exam entry criteria: A semester. Continuous assessme Final evaluation: A 87 – 100, B 77 – 8 Electronic board of the	e completion: m 50 points during the semester (Three assignments). Active participation in exercises and at least 35 points obtained during the ent (50%) and written examination (50%) / 10 questions. 6, C 69 – 76, D 61 – 68, E 56 – 60 ne course AIS2 - more information and news.				
Students will be able Students will be able psychological concep Students will be able Students will be able behaviour in response Students will be able to bring an all-round desired data-based m disadvantages.	to show understanding of the human behaviour in educational situations. le to describe, explain and justify possible teachers' decisions by using ots, principles and theories. to apply the psychological findings in the field of education. to explain how adolescents learn and retain new information, to explain their e to educational environment. e to explain the desired data-based modification of adolescents' behaviour d development of his personality and school performance, to explain the codification of the behaviour of adolescents with educational problems, with				
Brief outline of the c Introduction: The corr especially pedagogica Teaching is realized seminars using intera respect, support of in Syllabus: The subject help in school practic Implementation of p contemporary psycho	ourse: Itent of the course is based on current knowledge of psychological disciplines, al and school psychology. by a combination of lectures with engaging narrative interpretation and ctive, experiential methods, discussion and open communication with mutual dependence, activity and motivation of students. t and goals of psychology and educational psychology. Professional forms of e. psychological concepts of personality into school practice (Classical and banalytic theory, Individual psychology, Humanistic psychology, Concept of				

creative-humanistic education; Cognitivism and Theory of personal constructs). Social psychology of school and family. Learning and teaching. Health and disease; risk / protective factors with healthy related risk behavior. Psychology of students with behavioral and learning problems. Psychology of students with psychosocial, socio-cultural, health disadvantages. Psychological examination. Consulting process. Crisis intervention. Programs for prevention of risky behavior of schoolchildren.

#### **Recommended literature:**

Mareš, J.: Pedagogická psychologie. Praha : Grada 2013. Mareš, J., & ČÁP, J.: Psychologie pro učitele. Praha: Portál, 2001. Džuka, J.: Základy pedagogickej psychológie. Prešov: UK 2003. Orosová, O. a kol: Psychológia a pedagogická psychológia 1. Košice: UPJŠ, 2005. Orosová, O. a kol.: Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ 2012. Vágnerová, M.: Základy psychológie. Praha : Karolinum 2005. Vágnerová, M.: Vývojová psychológie. Praha : Karolinum 2005. Vágnerová, M.: Škoní podadenská psychologie pro pedagogy. Praha : Karolinum 2005. Výrost, J., Slaměník, I.: Sociální psychologie. Praha : Grada 2008. Výrost, J., Salměník, I.: Aplikovaná sociální psychológie I. Praha: Portál 1998. Fontana, D. : Psychologie ve školní praxi. Praha: Portál 1997. Zelina, M.: Stratégie a metódy rozvoja osobnosti. Bratislava, Iris: 1996. Křivohlavý, J.: Pozitívni psychologie. Praha: Portál 2004. Křivohlavý, J.: Psychologie zdraví. Praha: Portál 2003. **Course language:** 

slovak

Notes:

#### **Course assessment**

Total number of assessed students: 1734

А	В	С	D	Е	FX
11.01	20.13	23.88	22.38	20.18	2.42

**Provides:** prof. PhDr. Oľga Orosová, CSc., Mgr. Lucia Barbierik, PhD., PhDr. Anna Janovská, PhD.

#### **Date of last modification:** 14.09.2023

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
<b>Course ID:</b> KPPaPZ/PTPN/17	<b>Course name:</b> Psychology of Creativity and Working with Gifted Students in Teacher Practice				
Course type, scope a Course type: Practic Recommended cou Per week: 2 Per stu Course method: pre	and the method: ce rse-load (hours): ady period: 28 esent				
Number of ECTS cr	edits: 2				
Recommended seme	ester/trimester of the course: 2.				
Course level: II.					
Prerequisities:					
Conditions for course 1. active participation seminar work - 30p. final evaluation account FX 55 and less. Detain of the subject will be	<b>Se completion:</b> n in lessons (max. 2 absences) - 30p, 2. own output at the seminar - 40p, 3. By summing the points obtained during the semester, the student obtains the rding to the given scale: A 87 - 100, B 77 - 86, C 69 - 76, D 61 - 68, E 56 - 60, ailed information in the electronic board of the course in AIS2. The teaching realized by a combined method.				
Learning outcomes: The student understa the specifics of work apply methods to sup creativity in education	nds the basic factors and process of creativity. The student is able to explain ting with the gifted. He knows the methods of identifying talent and also can port creativity and the development of talent in the implementation of creative on.				
Brief outline of the of The concept of creating A brief history of the Social, psychological Cognitive processes Creativity and cognit Development of creat Talent and giftedness Methods of determint Methods of developing Creativity and talent Recommended literat	course: ivity. theory of creativity. and biological factors of creativity. in creativity. tive style. tivity. s. ing creativity and talent. ng creativity and talent. development programs. Specifics of working with the gifted children.				
DOČKAL, V. (2006) štruktúru osobnosti. Slovak Academic Pro HŘÍBKOVÁ, L. (200 výzkumy a jejich vzt DACEY, J.S LENN	<ul> <li>Inteligencia a tvorivosť, tvorivé nadanie od intelektovej schopnosti po</li> <li>In: KUSÁ, D. a kol. EDS. (2006): Zjavná a skrytá tvorivosť. Bratislava:</li> <li>ess</li> <li>09): Nadání a nadaní. Pedagogicko- psychologické přístupy, modely,</li> <li>ah ke školské praxi. Praha: Grada Publishing</li> <li>ION, K.H. (2000): Kreativita. Praha: Grada</li> </ul>				

GROSS, M.U.M. (2009): Highly Gifted Young People: Development from Childhood to Adulthood. In: SHAVININA, L. (2009): International Handbook on Giftedness. Part one. Springer

KUSÁ, D. a kol. EDS. (2006): Zjavná a skrytá tvorivosť. Bratislava: Slovak Academic Press KOLKOVÁ, S. (2000): Tvorivosť a jej rozvoj vo voľnočasových aktivitách detí (v školskom klube). Bratislava: Metodické centrum v Bratislave

LOKŠOVÁ, I., - LOKŠA, J.: (2003): Tvořivé vyučování. Praha: Grada

LAZNIBATOVÁ, J. (2004): Špecifiká vývinu a vzdelávania nadaných detí. In: Psychológia a patopsychológia dieťaťa, roč.39, č. 2-3

LAZNIBATOVÁ, J. (2001): Nadané dieťa, jeho vývin, vzdelávanie a podporovanie. Bratislava: Iris

MESÁROŠOVÁ, M. (1998): Nadané deti. Poznávanie a rozvíjanie ich osobnosti. Prešov: Manacon

SZOBIOVÁ, E. (2004): Tvorivosť – Od záhady k poznaniu. Bratislava: Stimul - Centrum informatiky a vzdelávania FIF UK

National and international scientific journlas

Course	language:
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slovak

Notes:

#### **Course assessment**

Total number of assessed students: 80

А	В	С	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0

Provides: Mgr. Lucia Barbierik, PhD.

Date of last modification: 24.06.2022

University: P. J. Šafá	rik University in Košice		
Faculty: Faculty of S	cience		
<b>Course ID:</b> KSSFaK/ ČGUAP/15	Course name: Reading Literacy in Educational Process		
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 28 esent		
Number of ECTS cr	edits: 2		
Recommended seme	ster/trimester of the cours	<b>e:</b> 2.	
Course level: II.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 44		
	abs	n	
100.0 0.0		0.0	
Provides: doc. PaedD	r. Ivica Hajdučeková, PhD.		
Date of last modifica	tion: 15.09.2023		
Approved: prof. PhD Ľubomír Kováč, CSc.	r. Oľga Orosová, CSc., prof	RNDr. Stanislav Krajči, PhD., prof. RNDr.	

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
<b>Course ID:</b> ÚINF/ PPU1a/15	Course name: Running pr	actice			
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present				
Number of ECTS cr	edits: 2				
Recommended seme	ster/trimester of the cours	e: 2.			
Course level: II.					
Prerequisities:					
Conditions for course completion: Conditions for continuous evaluation: Active participation in the selected type of internship based on the instructions given by the internship supervisor. Conditions for the final evaluation: Evaluation of the student's approach to the internship and the work performed in the internship by the internship supervisor.					
<b>Learning outcomes:</b> Experiences with the	implementation of a selecte	ed type of internship.			
Brief outline of the c The exact content of a menu of topics pres 1. assistance in the re submitted homework 2. assistance in the in 3. realizations of cour 4. creation of overvie	ourse: the internship is specified by ented by the course adminis calization of exercises for yu s stallation and maintenance rses for working with specifier www. from freely available so	y the internship supervisor. Students choose from strator. Typical topics of practice are: inger studnets, providing feedback to students on of computer and network infrastructure at UPJŠ ic software urces			
<b>Recommended litera</b> The study or technica internship by the inte	<b>iture:</b> Il literature is determined in rnship supervisor.	dividually depending on the focus of the			
<b>Course language:</b> Slovak or English					
Notes:					
<b>Course assessment</b> Total number of asses	ssed students: 205				
	abs	n			
	97.56	2.44			

Provides: Ing. Miron Kuzma, PhD.

Date of last modification: 23.11.2021

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
<b>Course ID:</b> ÚINF/ MPPb/15	Course name: Scheduled practice teaching
Course type, scope a Course type: Practi Recommended cou Per week: Per stud Course method: pro	ind the method: ce rse-load (hours): ly period: 36s esent
Number of ECTS cr	edits: 1
Recommended seme	ester/trimester of the course: 2.
Course level: II.	
<b>Prerequisities:</b> KPE/	MPPa/15 and KPE/PDU/15 and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)
<b>Conditions for cours</b> Conditions for ongoin 1. Observations for 1 2. Independent leadin 3. Participation in 6 a 4. Participation in a r Conditions for the fin 1. Submission of 11 a 2. Submission of a pr 3. Submission of a lin 4. Submission of a reac 5. Submission of a reac Conditions for succe Fulfillment of all ong	se completion: ng evaluation: 1 lessons of the subject of informatics. ng 1 lesson from the subject of informatics. analyzes from lessons. reflexive colloquium with a didactician of informatics. nal evaluation: observation records. roject of preparation for a lesson. st of observations and own lesson of the trainee. luation of pedagogical output of the trainee. eport on ongoing pedagogical practice. ssful completion of the course: going and final assignments.
Learning outcomes: Students acquire kno the subject of inform first experience with	wledge by observing the practical application of teaching skills for teaching atics and get to know the organization of school work. They also acquire their the practical implementation of a informatics lesson.
Brief outline of the of Students observe the it with teacher trainer is scheduled once a w The first two lessons under the guidance of	process of teaching informatics at secondary and primary school and analysed r. Practice takes place continuously during the course of the semester. Practice veek at the time of first to third lesson in schools. are students observing/teaching, the third lesson is for analysis of the first two f a teacher trainer.
Recommended litera KOSOVÁ, Beata, Al učiteľov [online]. Ba Bystrica, 226 pp. [cit publikacie.umb.sk/pu	ature: lena TOMENGOVÁ et al., 2015. Profesijná praktická príprava budúcich nská Bystrica: Vydavateľstvo Belianum, Univerzita Mateja Bela, Banská red. 2021-7-28]. ISBN 978-80-557-0860-7. Available from: https:// ublication/publicationFileDownload.php?ID=18667

OROSOVÁ, Renáta and Zuzana BOBEROVÁ, 2016. Pregraduálna príprava učiteľov: Organizácia pedagogickej praxe na UPJŠ [online]. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 142 pp. [cited 2021-7-28]. ISBN 978-80-8152-460-8. Available from: https:// unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickejpraxe-na-upjs BOBEROVÁ, Zuzana, 2017. Začínajúci učiteľ a školská legislatíva I. [online]. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 104 pp. [cited 2021-7-28]. ISBN 978-80-8152-490-5. Available from: https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitela-skolska-legislativa-i Current informatics textbooks for primary and secondary schools in Slovakia.

#### Course language:

Slovak

Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

Total number of assessed students: 72

abs	n
100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 01.08.2021

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
<b>Course ID:</b> ÚBEV/ MPPb/15	ourse ID: ÚBEV/ Course name: Scheduled practice teaching IPPb/15				
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present				
Number of ECTS cr	edits: 1				
Recommended seme	ster/trimester of the cours	e: 2.			
Course level: II.					
Prerequisities: KPE/	MPPa/15 and KPE/PDU/15	and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)			
<b>Conditions for course completion:</b> During the practice student observe 11 biology lessons and leads one own biology hour under the guidance of a teacher trainer. Confirmation of classroom visits. Written assessment from the teacher trainer.					
Learning outcomes: Students acquire know subject of biology and implementation of bio	wledge by observing the prac d getting to know the organi ology lesson.	tical application of teaching skills for teaching the zation of school work. Introduction into practical			
Brief outline of the c Students observe the with teacher trainer. I is scheduled once a w The first two hours c a teacher trainer.	ourse: process of teaching biology Practice takes place continu yeek at the time of first to th observation/teaching, the thi	at primary and secondary school and analyzed it ously during the course of the semester. Practice ird lesson in schools. rd hour analysing process under the guidance of			
Recommended litera	iture:				
Current biology textb	ooks for primary and secon	dary schools in Slovakia.			
Course language:					
Notes:					
<b>Course assessment</b> Total number of asses	ssed students: 540				
abs n					
99.63 0.37					
Provides:					
Date of last modifica	tion: 16.12.2021				

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚBEV/ SPP/08	Course name: School experiments and observations
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent
Number of ECTS cr	edits: 2
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
<b>Conditions for cours</b> Didactic analysis after of practical exercize integrated experimen	e completion: er conducted experiments and observations. Semester Project Methodology on the chosen topic biology curriculum, presentation and demonstration of t at the end of the semester.
<b>Learning outcomes:</b> Teacher preparation,	how to carry out biological school experiments and classroom observations.
Brief outline of the c The course is aimed a experiments and obse practical work during biological observation methods in the variou	<b>ourse:</b> at training and application skills that are necessary for the implementation of ervations in the classroom. It helps students develop theoretical knowledge in g training and familiarizes them with didactic methods in demonstrating the n and educational experiments. It focuses on the possibilities of applying these as stages of a teaching unit.
Recommended litera HUDÁKOVÁ, A., K rastlín. Košice: UPJŠ UŠÁKOVÁ, K. ČIPH Praktické cvičenia a s vyd. ISBN: 97880100 UŠÁKOVÁ, K. ČIPH Praktické cvičenia a s ISBN9788010023912 Internal study materia	<ul> <li>Iture:</li> <li>IMÁKOVÁ, K. 2005. Demonštračné pokusy a pozorovania z biológie</li> <li>; Prírodovedecká fakulta, 84 s. ISBN 80-7097-610-1.</li> <li>KOVÁ, E., NAGYOVÁ, S. GÁLOVÁ, T. 2012, Biológia pre gymnáziá 7:</li> <li>seminár I, Slovenské pedagogické nakladateľstvo - Mladé letá (Bratislava) 2.</li> <li>D23905</li> <li>KOVÁ, E., NAGYOVÁ, S. GÁLOVÁ, T. 2012, Biológia pre gymnáziá 8:</li> <li>seminár II, Slovenské pedagogické nakladateľstvo - Mladé letá (Bratislava) 2.</li> </ul>
<b>Course language:</b> Slovak	
Notes: x	

Course assessment Total number of assessed students: 106						
A B C D E FX						
66.98	17.92	12.26	1.89	0.0	0.94	
Provides: PaedDr. Andrea Lešková, PhD.						
Date of last modification: 31.05.2021						
Approved: prof. PhDr. Ol'ga Orosová, CSc., prof. RNDr. Stanislav Krajči, PhD., prof. RNDr. Ľubomír Kováč, CSc.						

Faculty: Faculty of Science

Course ID: ÚINF/	<b>Course name:</b> Seminar to diploma theses in informatics XI
DSU1a/15	

#### Course type, scope and the method: Course type: Practice Recommended course-load (hours):

Per week: 2 Per study period: 28

Course method: present

Number of ECTS credits: 2

#### **Recommended semester/trimester of the course: 2**.

Course level: II.

Prerequisities: ÚINF/PDSI1/15 or ÚINF/PDSI2/22

#### **Conditions for course completion:**

Conditions for ongoing evaluation:

- 1. Creation of a glossary of terms and a concept map for teaching a selected topic.
- 2. Creation of a collection of solved tasks for teaching the selected topic.
- 3. Creation of learning objectives and a graded system of tasks for teaching a selected topic.

Conditions for the final evaluation:

- 1. Update and presentation of the thesis website.
- Conditions for successful completion of the course:

Fulfillment of all ongoing and final assignments.

#### Learning outcomes:

The student will gain an overview of the issues of pedagogical research in the field of teaching informatics.

The student continuously works on his / her thesis (analyzes the content of teaching a selected topic, creates a glossary of terms and a concept map, creates a collection of tasks and then a system of graded tasks) and presents the ongoing results of his / her thesis.

#### Brief outline of the course:

1. Pedagogical research in the field of teaching informatics (analysis of selected scientific studies with discussion).

2. Pedagogical research in the field of teaching informatics (analysis of selected scientific studies with discussion).

3. Pedagogical research in the field of teaching informatics (design of own pedagogical action research).

4. Analysis of the content of teaching of the selected topic (creation of a glossary of terms and a concept map).

5. Analysis of the content of teaching of the selected topic (creation of a glossary of terms and a concept map).

- 6. Creation of a collection of solved problems for teaching the selected topic.
- 7. Creation of a collection of solved problems for teaching the selected topic.
- 8. Creation of a collection of solved problems for teaching the selected topic.
- 9. Creation of learning objectives and a graded system of tasks for teaching the selected topic.

- 10. Creation of learning objectives and a graded system of tasks for teaching the selected topic.
- 11. Presentations of ongoing results of students' theses, updating of thesis websites.
- 12. Presentations of ongoing results of students' theses, updating of thesis websites.

#### **Recommended literature:**

MEŠKO, Dušan, Dušan KATUŠČÁK and Ján FINDRA, 2013. Akademická príručka: Chcete byť úspešní na vysokej škole? 3. vydanie. Osveta, 495 pp. ISBN 9788080633929.

KATUŠČÁK, Dušan, 2013. Ako písať záverečné a kvalifikačné práce. Enigma, 162 pp. ISBN 8089132454.

COMPUTER SCIENCE TEACHERS ASSOCIATION. Home Page

Computer Science Teachers Association [online]. [cited 2021-7-30]. Available from: https://www.csteachers.org/

ASSOCIATION FOR COMPUTING MACHINERY. The ACM Digital Library [online]. [cited 2021-7-30]. Available from: https://dl.acm.org/

SPRINGER NATURE SWITZERLAND AG. Home - Springer [online]. [cited 2021-7-30]. Available from: https://link.springer.com/

BAČÍKOVÁ, Mária, Anna JANOVSKÁ and Oľga OROSOVÁ, 2019. Základy metodológie pedagogicko-psychologického výskumu: Sprievodca pre študentov učiteľstva [online]. 2. doplnené vydanie. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 195 pp. [cited 2021-7-29]. ISBN 978-80-8152-805-7. Available from: https://unibook.upjs.sk/sk/filozoficka-fakulta/1266-zaklady-metodologie-pedagogicko-psychologickeho-vyskumu-sprievodca-pre-

studentov-ucitelstva

Informatics in Education. Vilnius University Institute of Data Science and Digital Technologies. ISSN 2335-8971 (online). Also available from: https://infedu.vu.lt/journal/INFEDU Matematika–fyzika–informatika. Praha: PROMETHEUS. ISSN 1805-7705. Also available from:

http://www.mfi.upol.cz/index.php/mfi/index

UNIVERZITA MATEJA BELA V BANSKEJ BYSTRICI, TECHNICKÁ UNIVERZITA V LIBERCI, 2021. Zborníky medzinárodnej konferencie DidInfo (od roku 2011) [online]. [cited 2021-7-30]. Available from: http://www.didinfo.net/minule-rocniky

CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. Centrálny register záverečných a kvalifikačných prác [online]. [cited 2021-7-30]. Available from: https://cms.crzp.sk/

#### **Course language:**

Slovak and partly English due to selected information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

n

0.0

#### **Course assessment**

Total number of assessed students: 12

abs	
100.0	

100.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

Date of last modification: 01.08.2021

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	Science
<b>Course ID:</b> ÚINF/ DSU1b/22	Course name: Seminar to diploma theses in informatics XI
Course type, scope a Course type: Practi Recommended cou Per week: 1 Per stu Course method: pro	and the method: ce rse-load (hours): ady period: 14 esent
Number of ECTS cr	redits: 1
Recommended seme	ester/trimester of the course: 3.
Course level: II.	
Prerequisities: ÚINF	F/DSU1a/15
Conditions for course Conditions for ongoin 1. Creation of diagno 2. Creation of teachin 3. Creating preparating 4. Evaluation of pilos	se completion: ng evaluation: ostic tools for teaching selected topics. ng aids for teaching selected topics. on for teaching selected topics. t teaching

- Conditions for the final evaluation:
- 1. Update and presentation of the thesis website.
- Conditions for successful completion of the course:
- Conditions for successful completion of the course.
- Fulfillment of all ongoing and final assignments.

#### Learning outcomes:

The student continuously works on his / her thesis (creates diagnostic tools, teaching aids, thematic plan, preparation for teaching, implements and evaluates pilot teaching) and presents the ongoing results of his /her thesis.

#### Brief outline of the course:

1. Creation of diagnostic tools for teaching the selected topic (didactic test, evaluation section of the project).

2. Creation of diagnostic tools for teaching the selected topic (didactic test, evaluation section of the project).

- 3. Creation of teaching aids (reference materials, work files, tutorials, instructional videos).
- 4. Creation of teaching aids (reference materials, work files, tutorials, instructional videos).
- 5. Creation of teaching aids (reference materials, work files, tutorials, instructional videos).
- 6. Creating a thematic plan. Creation of preparations and implementation of pilot teaching.
- 7. Creation of preparations and implementation of pilot teaching.
- 8. Creation of preparations and implementation of pilot teaching.

9. Evaluation of pilot teaching (results of teaching, identified misconceptions of students, interesting student solutions, other observations from teaching).

10. Evaluation of pilot teaching (results of teaching, identified misconceptions of students, interesting student solutions, other observations from teaching).

11. Presentations of ongoing results of students' theses, updates of diploma websites.

12. Presentations of ongoing results of students' theses, updates of diploma websites.

#### **Recommended literature:**

MEŠKO, Dušan, Dušan KATUŠČÁK and Ján FINDRA, 2013. Akademická príručka: Chcete byť úspešní na vysokej škole? 3. vydanie. Osveta, 495 pp. ISBN 9788080633929.

KATUŠČÁK, Dušan, 2013. Ako písať záverečné a kvalifikačné práce. Enigma, 162 pp. ISBN 8089132454.

COMPUTER SCIENCE TEACHERS ASSOCIATION. Home Page

Computer Science Teachers Association [online]. [cited 2021-7-30]. Available from: https://www.csteachers.org/

ASSOCIATION FOR COMPUTING MACHINERY. The ACM Digital Library [online]. [cited 2021-7-30]. Available from: https://dl.acm.org/

SPRINGER NATURE SWITZERLAND AG. Home - Springer [online]. [cited 2021-7-30]. Available from: https://link.springer.com/

BAČÍKOVÁ, Mária, Anna JANOVSKÁ and Oľga OROSOVÁ, 2019. Základy metodológie pedagogicko-psychologického výskumu: Sprievodca pre študentov učiteľstva [online]. 2. doplnené vydanie. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, 195 pp. [cited

2021-7-29]. ISBN 978-80-8152-805-7. Available from: https://unibook.upjs.sk/sk/filozofickafakulta/1266-zaklady-metodologie-pedagogicko-psychologickeho-vyskumu-sprievodca-prestudentov-ucitelstva

Informatics in Education. Vilnius University Institute of Data Science and Digital Technologies. ISSN 2335-8971 (online). Also available from: https://infedu.vu.lt/journal/INFEDU Matematika, fuzika, informatika, Proha: PROMETHEUS, ISSN 1805-7705, Also available from:

Matematika–fyzika–informatika. Praha: PROMETHEUS. ISSN 1805-7705. Also available from: http://www.mfi.upol.cz/index.php/mfi/index

UNIVERZITA MATEJA BELA V BANSKEJ BYSTRICI, TECHNICKÁ UNIVERZITA V LIBERCI, 2021. Zborníky medzinárodnej konferencie DidInfo (od roku 2011) [online]. [cited 2021-7-30]. Available from: http://www.didinfo.net/minule-rocniky

CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. Centrálny register záverečných a kvalifikačných prác [online]. [cited 2021-7-30]. Available from: https://cms.crzp.sk/

#### **Course language:**

Slovak and partly English due to selected information sources

#### Notes:

By default, teaching is carried out face to face. If this is not possible (eg due to a pandemic), teaching is provided at a distance through video conferencing programs and LMS.

#### **Course assessment**

Total number of assessed students: 14

100.0	0.0

Provides: doc. RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 08.02.2022

University: P. J. Šafárik University in Košice
Faculty: Faculty of Science
Course ID: KSSFaK/VSJU/15Course name: Slovak Language for Teachers
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: 2
Recommended semester/trimester of the course: 1., 3.
Course level: II.
Prerequisities:
Conditions for course completion: Conditions for successful completion of the course: a) regular active participation in seminars, b) preparation of basic literature and content of lectures, c) elaboration of seminar work / creative task, d) successful completion of the final test. Conditions for obtaining the final evaluation: a) seminar work / creative task b) final test (min. 56%) Final evaluation: 100,00 - 92,00% A 91,99 - 83,00% B 82,99 - 74,00 % C 73.99 - 65.00% D 64.99 - 56.00% E 55.99% and less FX Prerequisites for successful completion of the course are annually updated on the electronic bulletin board in AIS2.
<ul> <li>Learning outcomes:</li> <li>During the final evaluation, the student demonstrates adequate mastery of the content standard of the course, which is defined by the required literature and seminar content, and demonstrates mastery of the performance standard, within which the student is able to practically apply the standard of standard Slovak in oral and written communications. manuals, gain skill in the bibliographic and citation standard. The graduate of the course normatively masters written communication on the basis of current orthographic rules and knows the basic characteristics of the means of expression of the text and functional language style.</li> <li>Brief outline of the course:</li> <li>Characteristics of basic terms of general linguistics (language – speech, language functions, the</li> </ul>

sign characteristics of basic terms of general inguistics (language – speech, language functions, the sign character of language, language levels, content and form in language, individual and general aspect of language units) on interdisciplinary background and with the application to Slovak as a national language. Language standard, codification, usus. Basic codification manuals. Application of orthographic rules in practical documents. Sound culture, pronunciation styles. Orthoepic phenomena in vowels and consonants. Application of rhythmic law and its exceptions. Assimilation and its specific features in Slovak. Style, stylization – methods and demonstration of structure of text components.

#### **Recommended literature:**

BÓNOVÁ, I. - JASINSKÁ, L.: Jazyková kultúra nielen pre lingvistov. Košice: UPJŠ 2019. 100 s.

FINDRA, J.: Štylistika slovenčiny. Martin : Osveta, 2004.

FINDRA, J.: Štylistika slovenčiny v cvičeniach. Martin : Osveta, 2005.

KRÁĽ, Á.: Pravidlá slovenskej výslovnosti. Martin: Matica slovenská 2006. 423 s.

Krátky slovník slovenského jazyka. Martin: Matica slovenská 2020.

SABOL, J.- SLANČOVÁ, D. - SOKOLOVÁ, M.: Kultúra hovoreného slova. Prešov, FF UPJŠ 1989.

Pravidlá slovenského pravopisu. Bratislava: Veda 2000 (2013).

SABOL, J. – BÓNOVÁ, I. – SOKOLOVÁ, M.: Kultúra hovoreného prejavu. Prešov: FF PU 2006.

SLANČOVÁ, D.: Praktická štylistika. 2., upravené a doplnené vydanie. Prešov: Slovacontact 1996. 178 s. ISBN 80-901417-9-X.

Slovník súčasného slovenského jazyka. Bratislava: Veda 2006.

Slovník súčasného slovenského jazyka. Bratislava: Veda 2011.

Slovník súčasného slovenského jazyka. Bratislava: Veda 2015.

#### **Course language:**

Slovak language

#### Notes:

#### **Course assessment**

Total number of assessed students: 150

А	В	С	D	Е	FX
14.0	23.33	32.67	14.67	13.33	2.0

Provides: PhDr. Iveta Bónová, PhD., PhDr. Lucia Jasinská, PhD.

**Date of last modification:** 24.06.2022

University: P. J. Šaf	árik University in Košice	
Faculty: Faculty of	Science	
<b>Course ID:</b> ÚINF/ SVK1/15	<b>ID:</b> ÚINF/ <b>Course name:</b> Student scientific conference	
Course type, scope Course type: Recommended cou Per week: Per stu Course method: pr	and the method: urse-load (hours): dy period: resent	
Number of ECTS c	redits: 4	
Recommended sem	ester/trimester of the course: 2., 4.	
Course level: I., II.		
Prerequisities		

#### **Conditions for course completion:**

It is required to be registered for the participation on the Student Scientific Conference (ŠVK) in accordance to the Statute of the Student Scientific Conference at PF UPJŠ and the specific conditions for participation in a given year, which are announced by the dean of the faculty. Within one year of the ŠVK, a student or a research team can register in one track only. It is also possible to apply with a written work that is an integral part of a bachelor's or master's thesis or a result of a student support program. The written work at ŠVK is the result of the student's own work or the work of the research team. It must not show elements of academic fraud and must meet the criteria of good research practice defined in the Rector's Decision no. 21/2021, which lays down the rules for assessing plagiarism at Pavol Jozef Šafárik University in Košice and its components. Fulfillment of the criteria is verified mainly in the process of supervision and in the process of work presentation. Failure to do so is reason for disciplinary action. The condition for the evaluation is a successful presentation and defense of the work in the relevant track headed by a commission appointed by the dean of the faculty. The commission decides on the eligibility of credits and states its decision in the memorandum of the ŠVK.

#### Learning outcomes:

The student demonstrates mastery of extended theory and professional terminology of the field of study, acquisition of knowledge, skills and competences, the ability to apply them creatively in solving selected field problems, ability to present the results using appropriate presentation methods and tools and ability to actively participate in a professional discussion.

#### **Brief outline of the course:**

- 1. Analysis of the state of the art in the field.
- 2. Design and implementation of a solution to the researched problem.
- 3. Evaluation of achieved results.
- 4. Preparation of work annotation.
- 5. Processing the written work.
- 6. Preparation of results presentation.
- 7. Presentation and defense of the obtained results.

#### **Recommended literature:**

The recommended literature is specified individu agreement with the consultant or the supervisor.	ally by the student or research team in
Course language: Slovak or english	
Notes:	
<b>Course assessment</b> Total number of assessed students: 29	
abs	n
100.0	0.0
Provides:	·
Date of last modification: 25.01.2022	
Approved: prof. PhDr. Oľga Orosová, CSc., pro Ľubomír Kováč, CSc.	f. RNDr. Stanislav Krajči, PhD., prof. RNDr.

University: P. J. Šafá	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: KPE/ MPPa/15	Course name: Supervised	Teaching Practice
Course type, scope a Course type: Practi Recommended cou Per week: Per stud Course method: pre	and the method: ce rse-load (hours): ly period: 36s esent	
Number of ECTS cr	redits: 2	
Recommended seme	ester/trimester of the cours	<b>e:</b> 1.
Course level: II.		
Prerequisities:		
Conditions for cours	se completion:	
Learning outcomes:		
Brief outline of the o	course:	
Recommended litera	ature:	
Course language:		
Notes:		
Course assessment Total number of asse	ssed students: 783	
	abs n	
100.0 0.0		
<b>Provides:</b> doc. PhDr. Petríková, PhD.	Beata Gajdošová, PhD., do	c. PaedDr. Renáta Orosová, PhD., Mgr. Katarína
Date of last modifica	ation: 12.03.2024	
Approved: prof. PhD Ľubomír Kováč, CSc	Dr. Oľga Orosová, CSc., prot	f. RNDr. Stanislav Krajči, PhD., prof. RNDr.

Ľubomír Kováč, CSc.

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	Faculty: Faculty of Science				
Course ID: KP PDU/15	E/ <b>Course na</b>	Course name: Teaching Methodology and Pedagogy			
Course type, sc Course type: 1 Recommendee Per week: 2/2 Course metho	cope and the met Lecture / Practice d course-load (h 2 Per study peri d: present	thod: ; ours): od: 28 / 28			
Number of EC	TS credits: 5				
Recommended	semester/trimes	ster of the cours	<b>e:</b> 1.		
Course level: II	•				
Prerequisities:					
<b>Conditions for</b>	course completi	on:			
Learning outco	Learning outcomes:				
Brief outline of the course:					
Recommended literature:					
Course language:					
Notes:					
Course assessm Total number of	nent f assessed studen	ts: 854			
А	В	С	D	Е	FX
24.82	28.34	26.35	14.4	5.62	0.47
Provides: doc. PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.					
Date of last mo	dification: 12.03	3.2024			
Approved: prof Ľubomír Kováč	f. PhDr. Ol'ga Or , CSc.	osová, CSc., prof	. RNDr. Stanisla	v Krajči, PhD., p	rof. RNDr.

University: P. J. Šafári	ik University in Košice
Faculty: Faculty of Sc	ience
Course ID: KPPaPZ/UPR/15	Course name: The Art of Aiding by Verbal Exchange
Course type, scope an Course type: Practice Recommended cours Per week: 2 Per stud Course method: pres	ad the method: e se-load (hours): ly period: 28 sent
Number of ECTS cree	dits: 2
Recommended semes	ter/trimester of the course: 2.
Course level: II.	
Prerequisities:	
Conditions for course 1. Active participation 2. Elaboration and pre points 20; minimum m 3. Final test in the rang points 20; minimum n presentation and the te The evaluation of the c set requirements, whic ensure an objective an moral standards. There process or in the assess	<ul> <li>completion:</li> <li>in seminars</li> <li>esentation of PPT presentation on the assigned topic. Maximum number of umber of points 11.</li> <li>ge of 20 questions from selected chapters and lectures. Maximum number of umber of points 11. The final evaluation (mark) is the sum of points for the est. A 40b - 37b B 36b - 33b C 32b - 29b D 28b - 25b E 24b - 21b FX 20b - 0b course and its subsequent completion will be based on clearly and objectively ch will be set in advance and will not change. The aim of the assessment is to ad fair mapping of the student's knowledge while adhering to all ethical and re is no tolerance for students' fraudulent behavior, whether in the teaching assent process.</li> </ul>
Learning outcomes: Provide students with clarify orders. Reflect The student is able to helping conversation. The student is able to techniques to help the The student is able to u process. The method of teachir students' needs, expect respect and feedback of The content of the curr topicality of the topics the connection of the c in lectures and semina	basic information about a systemic approach to helping. Train interviewing, on help options. demonstrate an understanding of the theoretical principles of conducting a describe, explain and evaluate in what context to use which of the selected interview with the individual. se basic selected techniques when working with an individual in the interview ng the subject will be oriented to the student. Lecturers will be interested in tations and opinions so as to encourage them to think critically by expressing on their opinions and needs. iculum will be based on primary and high-quality sources that will reflect the so as to ensure the connection of the curriculum with other subjects and also curriculum with practice. Students will be expected to take an active approach ars with an emphasis on their independence and responsibility.

Psychological preparation for conducting an interview. Self-reflection of one's own possibilities, abilities to lead a conversation, to help. Possibilities of helping with conversations from the point of view of selected psychological approaches. Systematic approach to helping. Interview and professional ways to help and control. Objectivist and constructivist framework of conversation in theory and practice. Is it possible to help with control? Opening the interview, negotiating the course, course, ending the interview. Constructivist questions in the interview. Analysis of individual phases of conducting the interview. Reflex team possibilities of help in conversation. Models of reflective teams. Model situations of conducting an interview with a group. Professional possibilities, advantages and pitfalls of solving problems with an individual, with a group.

#### **Recommended literature:**

#### Course language:

Notes:

#### Course assessment

Total number of assessed students: 180

А	В	С	D	Е	FX
90.56	2.78	5.0	1.11	0.56	0.0

Provides: Mgr. Ondrej Kalina, PhD.

Date of last modification: 24.06.2022

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚBEV/ ZOG1/03	Course name: Zoogeography
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 2 Per Course method: pre	Ind the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of ECTS cr	edits: 6
Recommended seme	ster/trimester of the course: 1., 3.
Course level: I., II.	
Prerequisities:	
<b>Conditions for course</b> Active participation is Preparation of oral pro- Completion of two set Oral examination.	<b>Se completion:</b> In seminars. resentation to a selected topic. emestral written examinations.
<b>Learning outcomes:</b> The main goal of the animals on the Earth, the faunal distributio	subject is to get knowledge on the basic reasons of recent distribution of the zoogeographic regionalization of the Earth's surface and human influence on n in the history.
Brief outline of the c This course will revi processes that influent information on the h interaction with env	<b>ourse:</b> lew our current understanding of the patterns of animal distribution and the nce distributions of species and their attributes. Zoogeography will integrate istorical and current ecology, genetics, and physiology of animals and their irronmental processes (continental drift, climate) in regulating geographic

distributions. The course will emphasize descriptive and analytical approaches useful in hypothesis testing in zoogeography and will illustrate applied aspects of zoogeography (e.g. refuge design in

## conservation).

#### **Recommended literature:**

Buchar, J., 1983: Zoogeografie. SPN Praha

Darlington, P.J., 1998: Zoogeography: The geographical distribution of animals. Krieger, USA Lomolino M.V., Brown J.H., Riddle B. R., 2005: Biogeography. Sinauer Associates, 1-845 Plesník, P., Zatkalík, F., 1996: Biogeografia. Vysokoškolské skriptá, PríFUK Bratislava

#### **Course language:**

Notes:
<b>Course assessm</b> Total number o	nent f assessed studen	ts: 1017			
А	В	С	D	Е	FX
24.98	23.5	23.4	18.68	7.67	1.77
Provides: prof. RNDr. Ľubomír Kováč, CSc.					
Date of last modification: 10.12.2021					
Approved: pro Ľubomír Kováč	f. PhDr. Ol'ga Or , CSc.	osová, CSc., pro	f. RNDr. Stanisla	v Krajči, PhD., p	orof. RNDr.