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## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> CJP/ PFAJAKA/07		<b>Course name:</b> Academic English			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> I., II., N					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Combined method of teaching (classroom/distance) Active classroom participation, assignments handed in on time, 2 absences tolerated 1 test (10th week), no retake. (in classroom, in case of distance learning due to worsened epidemiological situation – online) Presentation on chosen topic (in case of distance learning - online thorough MS Teams) Final evaluation- average assessment of test (40%), essay (30%) and presentation (30%). Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b> Seal B.: Academic Encounters, CUP, 2002 T. Armer :Cambridge English for Scientists, CUP 2011 M. McCarthy M., O'Dell F. - Academic Vocabulary in Use, CUP 2008 Zemach, D.E, Rumisek, L.A: Academic Writing, Macmillan 2005 Olsen, A. : Active Vocabulary, Pearson, 2013 <a href="http://www.bbclearningenglish.com">www.bbclearningenglish.com</a> Cambridge Academic Content Dictionary, CUP, 2009					
<b>Course language:</b> English language, level B2 according to CEFR.					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 380					
A	B	C	D	E	FX
33.68	22.11	15.53	10.0	6.58	12.11
<b>Provides:</b> Mgr. Viktória Mária Slovenská					
<b>Date of last modification:</b> 17.09.2020					

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/AOS1/15	<b>Course name:</b> Administration of OS
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b> To be able to install Linux based system, divide disks, to know how to install, configure and manage several network deamons.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Introduction to network services</li> <li>2. SSH</li> <li>3. Routing and NAT</li> <li>4. Introduction to Firewall</li> <li>5. Advanced firewall settings</li> <li>6. DHCP server</li> <li>7. Web server (apache, php, mysql)</li> <li>8. Monitoring Server (SNMP, MRTG)</li> <li>9. Samba Server</li> <li>10. Mail server (smtp, imap, postfix)</li> <li>11. Proxy server</li> <li>12. Windows server</li> <li>13. Windows Server II.</li> <li>14. Introduction to Virtualization (Hyper-V OpenVZ)</li> </ol>	
<b>Recommended literature:</b> <ol style="list-style-type: none"> <li>1. Linux Documentation Project, 4 updated edition. Brno: Computer Press (2008).</li> <li>2. Stanek, W.: Windows Server 2012 Inside Out. Microsoft Press (2013)</li> <li>3. Shah, S. Soyinka, W. Administration Linux. Grade (2007)</li> <li>4. Nemeth, E., et al.: Linux. Brno: Computer Press (2008)</li> </ol>	
<b>Course language:</b> Slovak or english	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 28					
A	B	C	D	E	FX
57.14	21.43	14.29	0.0	7.14	0.0
<b>Provides:</b> RNDr. JUDr. Pavol Sokol, PhD., RNDr. Tomáš Bajtoš					
<b>Date of last modification:</b> 10.02.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/ ASFU/15		<b>Course name:</b> Astrophysics			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 3					
<b>Recommended semester/trimester of the course:</b> 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Test within the curriculum presented during the course; seminar essay. Oral exam with preparation; 3 questions within the curriculum presented during the course.					
<b>Learning outcomes:</b> Become acquainted with basic knowledge about the structure and evolution of the universe.					
<b>Brief outline of the course:</b> The stars, their basic properties, structure and evolution. Structure and distribution of matter in the universe. Cosmological theories, formation, evolution and future of the universe.					
<b>Recommended literature:</b> 1. Carroll, B. W., Ostlie, D. A., An Introduction to Modern Astrophysics, Addison-Wesley Publishing Company, Reading, Massachusetts, 1996; 2. Contopoulos, D. Kotsakis, Cosmology, the structure and evolution of the Universe, Springer, 1984; 3. Narlikar, J.V., An Introduction to Cosmology, Cambridge University Press, Cambridge, 2002; 4. Pasachoff, J.M., Filippenko, A., The Cosmos: Astronomy in the New Millennium, Cambridge University Press, 2013;					
<b>Course language:</b> Slovak, English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 10					
A	B	C	D	E	FX
90.0	10.0	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Rudolf Gális, PhD.					
<b>Date of last modification:</b> 26.09.2017					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPO/SDaM/15		<b>Course name:</b> Child and Adolescent Sociology			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 867					
A	B	C	D	E	FX
49.83	29.87	15.34	3.34	1.27	0.35
<b>Provides:</b> Mgr. Alexander Onufrák, PhD.					
<b>Date of last modification:</b> 15.06.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/MT/09		<b>Course name:</b> Class Management			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 514					
A	B	C	D	E	FX
53.89	34.24	8.75	1.56	0.58	0.97
<b>Provides:</b> doc. PaedDr. Renáta Orosová, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ KKV1/15	<b>Course name:</b> Classical and quantum computations
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 / 1 <b>Per study period:</b> 42 / 14 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 6	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Written work Written and oral examination	
<b>Learning outcomes:</b> To provide information on quantum computer and quantum computations. To compare classical and quantum models and methods.	
<b>Brief outline of the course:</b> The basics of classical theory of computation: Turing machines, Boolean circuits, parallel algorithms, probabilistic computation, NP-complete problems, and the idea of complexity of an algorithm. Introduction of general quantum formalism (pure states, density matrices, and superoperators), universal gate sets and approximation theorems. Grover's algorithm, Shor's factoring algorithm, and the Abelian hidden subgroup problem. Parallel quantum computation, a quantum analogue of NP-completeness, and quantum error-correcting codes.	
<b>Recommended literature:</b> 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	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 136					
A	B	C	D	E	FX
25.0	35.29	13.97	12.5	6.62	6.62
<b>Provides:</b> prof. RNDr. Gabriel Semanišin, PhD., RNDr. Zuzana Bednárová, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> CJP/ PFAJKKA/07	<b>Course name:</b> Communicative Competence in English
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> I., II., N	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Active participation in class and completed homework assignments. Students are allowed to miss two classes at the most. Online teaching (MS Teams), in case of an improved epidemiological situation = on-site teaching. 2 credit tests (presumably in weeks 6/7 and 12/13) and a short oral presentation in English. The tests will be taken online (MS Teams) during online teaching and in class in case of on-site classes. The presentation will be sent to the course instructor as a video recording. Final evaluation consists of the scores obtained for the 2 tests (70%) and the presentation (30%). Final grade will be calculated as follows: A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64 % and less.	
<b>Learning outcomes:</b> Uplatnenie a aktívne používanie svojich teoretických vedomostí v praktických komunikačných situáciách. Zdokonalenie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a vecnej kompetencie, predovšetkým zlepšujú komunikáciu, schopnosť prijímať a formulovať výpovede, efektívne vyjadrovať svoje myšlienky ako aj orientovať sa v obsahovom pláne výpovede. Precvičovanie rečových intencií kontaktných (napr. pozdravy, oslovenia, pozvanie, oslovenie), informatívnych (napr. získavanie a podávanie informácií, vyjadrenie priestorových a časových vzťahov), regulačných (napr. prosba, poďakovanie, zákaz, pochvala, súhlas, nesúhlas) a hodnotiacich (napr. vyjadrenie vlastného názoru, stanoviska, želania, emócií). Výsledkom budovania praktickej jazykovej kompetencie majú byť vedomosti a zručnosti zodpovedajúce požiadavkám a kritériám dokumentu Spoločný európsky referenčný rámec pre vyučovanie jazykov.	
<b>Brief outline of the course:</b> Rodina, jej formy a problémy Vyjadrovanie pocitov a dojmov Dom, bývanie a budúcnosť Formy a dialekty v anglickom jazyku Život v meste a na vidieku Kolokácie a idiomy, zaužívané slovné spojenia Prázdniny a sviatky vo svete	

Životné prostredie a ekológia Výnimky zo slovosledu Frázové slovesá a ich použitie Charakteristiky neformálneho diškurzu					
<b>Recommended literature:</b> www.bbclearningenglish.com McCarthy M., O'Dell F.: English Vocabulary in Use, Upper-Intermediate. CUP, 1994. Misztal M.: Thematic Vocabulary. SPN, 1998. Fictumova J., Ceccarelli J., Long T.: Angličtina, konverzace pro pokročilé. Barrister and Principal, 2008. Peters S., Gráf T.: Time to practise. Polyglot, 2007. Jones L.: Communicative Grammar Practice. CUP, 1985. Alexander L.G.: Longman English Grammar. Longman, 1988.					
<b>Course language:</b> English language, B2 level according to CEFR					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 260					
A	B	C	D	E	FX
40.38	22.31	18.85	8.85	6.54	3.08
<b>Provides:</b> Mgr. Barbara Mitříková, Mgr. Zuzana Nad'ová					
<b>Date of last modification:</b> 11.02.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> CJP/ PFAJGA/07		<b>Course name:</b> Communicative Grammar in English			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> I., II., N					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Active classroom participation (max. 2x90 min. absences tolerated). 2 test (5th/6th and 12/13th week), no retake. Final evaluation- average assessment of tests. Grading scale: A 93-100%, B 86-92%, C 79-85%, D 72-78%, E 65-71%, FX 64% and less.					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b> Vince M.: Macmillan Grammar in Context, Macmillan, 2008 McCarthy, O'Dell: English Vocabulary in Use, CUP, 1994 C. Oxengen, C. Latham-Koenig: New English File Advanced, Oxford 2010 Misztal M.: Thematic Vocabulary, Fragment, 1998 <a href="http://www.bbclearningenglish.com">www.bbclearningenglish.com</a> <a href="http://ted.com/talks">ted.com/talks</a>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 406					
A	B	C	D	E	FX
39.66	18.97	16.75	8.62	5.91	10.1
<b>Provides:</b> Mgr. Lenka Klimčáková					
<b>Date of last modification:</b> 14.09.2019					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KGER/ NJKG/07		<b>Course name:</b> Communicative Grammar in German Language			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 54					
A	B	C	D	E	FX
59.26	11.11	9.26	3.7	9.26	7.41
<b>Provides:</b> Mgr. Blanka Jenčíková					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ VKN/15	<b>Course name:</b> Computational and cognitive neuroscience II
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Midterm exam Final exam consisting of written and/or oral part	
<b>Learning outcomes:</b> Advanced topics in computational and cognitive neuroscience, and in the tools used in neuroscience.	
<b>Brief outline of the course:</b> 1. Intro: Cognitive psychology, neural modeling. Theme 1: Topics in cognitive and neural science 2. Neural basis of vision 3. Visual object recognition and visual scene analysis 4. Auditory cognition. Echo suppression. Auditory scene analysis 5. Cortical sound processing. 6. Other topics in the study of brain and main: thinking, consciousness, emotions, motivation Topic 2: Modeling in cognitive and neural science 7. Intro 8. Connectionism, STM and LTM modeling 9. Additive and shunting neural networks. 10. Learning rule Outstar. 11. Adaptive resonance theory. 12. Statistical and decision-theory modeling Topic 3: Current research at UPJS 13. Invited lecture	
<b>Recommended literature:</b> 1. KANDEL, E. R., SCHWARTZ, J. H. and JESSELL, T.M.: Principles of Neural Science. McGraw-Hill, 2021 ISBN-13: 978-1259642234 2. Dayan P and LF Abbott: Theoretical Neuroscience - Computational and Mathematical Modeling of Neural Systems. MIT Press, 2005 ISBN-13: 978-0262541855 3. Thagard P: Mind: 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					
<b>Course language:</b> Slovak or English					
<b>Notes:</b> Content prerequisites: basics of neurobiology, cognitive psychology, linear algebra and differential equations, programming, or instructor's consent					
<b>Course assessment</b> Total number of assessed students: 8					
A	B	C	D	E	FX
50.0	12.5	25.0	12.5	0.0	0.0
<b>Provides:</b> doc. Ing. Norbert Kopčo, PhD.					
<b>Date of last modification:</b> 08.07.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ VYZ1/15	<b>Course name:</b> Computational complexity
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Oral examination.	
<b>Learning outcomes:</b> To give the students the theoretical background in computational complexity and theory of NP-completeness.	
<b>Brief outline of the course:</b> 1: Introduction: the notion of computational complexity, computational time, computational model, example - the problem of sorting, computational complexity as an asymptotic function 2: Basic computational models: RAM and RASP computers, the cost of an elementary step on these computers, single-tape Turing machine, multi-tape Turing machine, nondeterministic variants of these computational models, transformations among these models with respect to the time complexity 3: The classes P and NP: basic definitions, presenting (un)undirected graphs on the input, 3COL – the set of all 3-colorable graphs is in NP, 2COL - the set of all 2-colorable graphs is in P, SAT – the set of satisfiable Boolean formulas is in NP, CNF-SAT - Boolean formulas in conjunctive normal form 4: Variants of P and NP: decision problem, the problem of finding a solution, optimization problem, polynomial conversions among different variants 5: NP-completeness: reducibility in polynomial time and its transitivity, definition of the NP-completeness and its basic properties 6: NP-completeness of SAT 7: Variants of SAT: 3CNF-SAT - satisfiability of Boolean formulas in 3-conjunctive normal form, kCNF-SAT, CNF-SAT - 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 NP-complete 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. Press, 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 prerequisites:

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: 335

A	B	C	D	E	FX
57.61	15.52	11.94	7.16	7.46	0.3

**Provides:** prof. RNDr. Viliam Geffert, DrSc.

**Date of last modification:** 17.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/MSSUI/15		<b>Course name:</b> Computer science and didactics of informatics			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 1					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> II.					
<b>Prerequisites:</b> ÚINF/DIN1b/15, ÚINF/TIK1/15, (ÚINF/UGR1/15 and lebo ÚINF/KKV1/15 and lebo ÚINF/KKV1/21 and lebo ÚINF/UNS1/15 and lebo ÚINF/FO1/15)					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 14					
A	B	C	D	E	FX
42.86	21.43	21.43	7.14	7.14	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 24.04.2017					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/MPPc/15	<b>Course name:</b> Continuous Practice Teaching I
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 4t <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚFV/MPPb/15	
<b>Conditions for course completion:</b> Confirmed list of sittings in on classes and teaching as a confirmation of attendance in the required extent of 6 lessons of sitting in on classes and 18 physics lessons taught by student. Lesson records and written preparation for the lessons.	
<b>Learning outcomes:</b> Student gains under the guidance of teacher trainer practical teaching skills within the subject of Physics.	
<b>Brief outline of the course:</b> Sitting in on classes, teaching physics lessons by student, consulted with teacher trainer, analysis of observed and taught lessons.	
<b>Recommended literature:</b> Textbooks for lower and upper secondary school physics	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 15	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Jozef Hanč, PhD.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/MPPd/15	<b>Course name:</b> Continuous Practice Teaching II
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 6t <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 4.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚFV/MPPc/15	
<b>Conditions for course completion:</b> Confirmed list of sittings in on classes and teaching as a confirmation of attendance in the required extent of 8 lessons of sitting in on classes and 30 physics lessons taught by student. Lesson records and written preparation for the lessons.	
<b>Learning outcomes:</b> Student gains under the guidance of teacher trainer practical teaching skills within the subject of Physics.	
<b>Brief outline of the course:</b> Sitting in on classes, teaching physics lessons by student, consulted with teacher trainer, analysis of observed and taught lessons.	
<b>Recommended literature:</b> Textbooks for lower and upper secondary school physics	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 11	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Jozef Hanč, PhD.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/MPPc/15	<b>Course name:</b> Continuous practice teaching I
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 4t <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚINF/MPPb/15	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: <ol style="list-style-type: none"> <li>1. Observations in 6 lessons of the subject of informatics.</li> <li>2. Independent leading of 18 lessons of the subject informatics.</li> <li>3. Participation in analyzes from 20 lessons with a teacher trainer.</li> <li>4. Active participation in out-of-class and after-school activities.</li> </ol> Conditions for the final evaluation: <ol style="list-style-type: none"> <li>1. Submission of 6 observation records from lessons.</li> <li>2. Submission of 18 lesson projects of preparation for lessons.</li> <li>3. Submission of a list of observations and own lesson of the trainee.</li> <li>4. Submission of an evaluation of the trainee's teaching practice.</li> <li>5. Submission of a report on the continuous pedagogical practice.</li> <li>6. Submission of a feedback sheet from the continuous pedagogical practice.</li> </ol> Conditions for successful completion of the course: Fulfillment of all ongoing and final assignments.	
<b>Learning outcomes:</b> Under the professional supervision of an experienced teacher trainer, the student acquires practical pedagogical skills in teaching the subject of informatics. He gets acquainted with school life, out-of-class and after-school activities activities.	
<b>Brief outline of the course:</b> Observations of teacher trainer lessons, consultations of lesson preparations, preparation of teaching aids, leading own lessons, methodological and scientific analysis of lessons, active participation in out-of-class and after-school activities.	
<b>Recommended literature:</b> KOSO VÁ, Beata, Alena TOMENGO VÁ et al., 2015. Profesi jná praktická príprava budúch 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: <a href="https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667">https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667</a> OROSO VÁ, 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: <a href="https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs">https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs</a> 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: <a href="https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i">https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i</a> Current informatics textbooks for primary and secondary schools in Slovakia.	
<b>Course language:</b> Slovak	
<b>Notes:</b> 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.	
<b>Course assessment</b> Total number of assessed students: 13	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD.	
<b>Date of last modification:</b> 04.08.2021	
<b>Approved:</b>	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/MPPd/15	<b>Course name:</b> Continuous practice teaching II
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 6t <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 4.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚINF/MPPc/15	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: <ol style="list-style-type: none"> <li>1. Observations in 8 lessons of the subject of informatics.</li> <li>2. Independent leading of 30 lessons of the subject informatics.</li> <li>3. Participation in analyzes from 30 lessons with a teacher trainer.</li> <li>4. Active participation in out-of-class and after-school activities.</li> </ol> Conditions for the final evaluation: <ol style="list-style-type: none"> <li>1. Submission of 8 observation records from lessons.</li> <li>2. Submission of 30 lesson projects of preparation for lessons.</li> <li>3. Submission of a list of observations and own lesson of the trainee.</li> <li>4. Submission of an evaluation of the trainee's teaching practice.</li> <li>5. Submission of a report on the continuous pedagogical practice.</li> <li>6. Submission of a feedback sheet from the continuous pedagogical practice.</li> </ol> Conditions for successful completion of the course: Fulfillment of all ongoing and final assignments.	
<b>Learning outcomes:</b> Under the professional supervision of an experienced teacher trainer, the student acquires practical pedagogical skills in teaching the subject of informatics. He gets acquainted with school life, out-of-class and after-school activities activities.	
<b>Brief outline of the course:</b> Observations of teacher trainer lessons, consultations of lesson preparations, preparation of teaching aids, leading own lessons, methodological and scientific analysis of lessons, active participation in out-of-class and after-school activities.	
<b>Recommended literature:</b> KOSO VÁ, Beata, Alena TOMENGO VÁ et al., 2015. Profesi jná praktická príprava budú cich 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: <a href="https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667">https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667</a> OROSO VÁ, 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: <a href="https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs">https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs</a> 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: <a href="https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i">https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i</a> Current informatics textbooks for primary and secondary schools in Slovakia.	
<b>Course language:</b> Slovak	
<b>Notes:</b> 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.	
<b>Course assessment</b> Total number of assessed students: 10	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD.	
<b>Date of last modification:</b> 04.08.2021	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/ TTUP/15		<b>Course name:</b> Creating Text Teaching Aids			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 170					
A	B	C	D	E	FX
58.82	27.65	8.82	3.53	1.18	0.0
<b>Provides:</b> doc. PaedDr. Renáta Orosová, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KSSFaK/ KJPUAP/15		<b>Course name:</b> Culture of Spoken Discourse			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 1 <b>Per study period:</b> 14 / 14 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 1.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 0					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b> PhDr. Iveta Bónová, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/ ODPU/15		<b>Course name:</b> Defence of diploma thesis			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 15					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> II.					
<b>Prerequisites:</b> ÚINF/DSU1b/15					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 10					
A	B	C	D	E	FX
50.0	0.0	50.0	0.0	0.0	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/TSM1a/15	<b>Course name:</b> Development and processing of multimedia
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: 1. Creation of an educational animation. 2. Creation of a poster with vector and raster graphics. 3. Creation of an educational audio recording. 4. Creation of an instructional educational video. Conditions for successful completion of the course: Obtaining at least 50% of points for ongoing assignments.	
<b>Learning outcomes:</b> After completing this course, students are able to: a) deepen the knowledge of the principles of multimedia and to practice skills in the creation and processing of multimedia, b) create multimedia teaching aids with accompanying methodological commentary for teaching selected topics of school informatics, c) analyze and discuss the issue of teaching the creation and processing of multimedia in school informatics.	
<b>Brief outline of the course:</b> 1. Digitization and processing of raster image. 2. Digitization and processing of raster image. 3. Creating animations. 4. Creation of vector graphics. 5. Creation of vector graphics. 6. Creation of vector graphics. 7. 3D modeling and printing 8. 3D modeling and printing 9. Digitization and sound processing. 10. Digitization and sound processing. 11. Digitization and video processing. 12. Digitization and video processing.	
<b>Recommended literature:</b>	

LACHS, V., 2000. Making Multimedia in the Classroom. London : RoutledgeFalmer. 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: Multimédia. 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: 14

A	B	C	D	E	FX
42.86	21.43	21.43	7.14	7.14	0.0

**Provides:** doc. RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 24.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/TSM1b/15	<b>Course name:</b> Development and processing of multimedia
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2., 4.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: 1. Programmed SVG image. 2. Programmed animation. 3. Programmed sound or melody. 4. Programmed multimedia application. Conditions for successful completion of the course: Obtaining at least 50% of points for ongoing assignments.	
<b>Learning outcomes:</b> After completing this course, students are able to: a) explain the basic principles and procedures in multimedia programming, b) design and program multimedia applications.	
<b>Brief outline of the course:</b> 1. Programming of still images. 2. Programming of still images. 3. Programming of still images. 4. Programming of still images. 5. Animation programming. 6. Animation programming. 7. Animation programming. 8. Programming of sounds and melodies. 9. Programming of sounds and melodies. 10. Programming of sounds and melodies. 11. Creating a multimedia application. 12. Creating a multimedia application.	
<b>Recommended literature:</b> SATHAYE, Ninad, 2010. 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

A	B	C	D	E	FX
16.67	66.67	16.67	0.0	0.0	0.0

**Provides:** PaedDr. Ján Guniš, PhD.

**Date of last modification:** 24.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/VPU/17	<b>Course name:</b> Developmental Psychology for Teachers
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Evaluation of participation in teaching, continuous evaluation of activity in seminars, evaluation of seminar work,	
<b>Learning outcomes:</b> The graduate will understand the principles of developmental psychology, and will be able to characterize the norm in separate developmental stages with a specific focus on the period of school age and adolescence. As part of the seminar work, a students will process current knowledge published in foreign journals. They will have a knowledge about the current social discourse on the topics covered. The graduate will be able to consider various aspects of the possible influence of parents and friends on the development of piupils and apply the knowledge of developmental psychology in the practice of the teacher.	
<b>Brief outline of the course:</b> Determinants and factors of development, cognitive development, personality development. Socialization in separate developmental stages (family, peers, school). Specifics of development in the period of school age, in pubescence and adolescence. Parents and their role in child development. Application of knowledge of developmental psychology in the teacher's practice - communication with students in different developmental stages, creating a teacher-student relationship with respect to the development needs of the student.	
<b>Recommended literature:</b> Vágnerová, M. Vývojová psychologie. Portál, Praha 2000 Říčan, P. Cesta životem. Portál, Praha, 2004. Thorová, K. Vývojová psychologie. Portál, Praha, 2015. Macek, P. Adolescence. Praha: Portál, 2003 Matějček, Z. - rôzne diela	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 44					
A	B	C	D	E	FX
65.91	22.73	4.55	6.82	0.0	0.0
<b>Provides:</b> Mgr. Mária Bačíková, PhD.					
<b>Date of last modification:</b> 24.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ DF1a/15	<b>Course name:</b> Didactics of Physics I
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> teaching plan for two lessons 10p micro teaching activities 20p educational project 20p answering questions during the course 10p end-of course oral examination 40p	
<b>Learning outcomes:</b> Knowledge and skills in the field of Physics education, overview about the problems of Physics education, basic skills necessary to prepare and guide educational activities, school experiments, problem solving and to use modern media for physics education.	
<b>Brief outline of the course:</b> Within the Didactics of Physics subject the core problems of physics education are introduced and case studies of their solving are interpreted. Strategies on design and implementation of educational activities, their evaluation and the use of modern media are introduced and corresponding skills are trained.	
<b>Recommended literature:</b> 1.J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990 2.J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999 3.E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978 4.E. Mechlová: Didaktika fyziky 1, 2, PdF Ostrava, 1989 5.J. Fenclová: Úvod do teórie a metodológie didaktiky fyziky, SPN Praha, 1982 Primary school textbooks for Physics actual didactic publications	
<b>Course language:</b> Slovak, English	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 16					
A	B	C	D	E	FX
56.25	43.75	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.					
<b>Date of last modification:</b> 29.04.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/DF1b/15	<b>Course name:</b> Didactics of Physics II
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚFV/DF1a/15	
<b>Conditions for course completion:</b> teaching plan for two lessons 10p micro teaching activities 20p educational project 20p answering questions during the course 10p end-of course oral examination 40p	
<b>Learning outcomes:</b> knowledge and skills in the field of Physics education, overview about the problems of Physics education, basic skills necessary to prepare and guide educational activities, school experiments, problem solving and to use modern media for physics education	
<b>Brief outline of the course:</b> 1. Didactic methods, forms and tools in physics education 2. Graphs in education 3. Control, evaluation and assessment of students results, 4. Tests 5. Everyday physics and its application in education 6. Computer based measurements: 7. Using of Internet and multimedia in education 8. IBSE 9. Informal activities to support physics education 10. Life long learning, science teacher training 11. 12. Semestral project presentation	
<b>Recommended literature:</b> 1.J. Janovič a kol.: Didaktika fyziky, MFF UK Bratislava, 1990 2.J. Janovič a kol.: Vybrané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999 3.E. Kašpar a kol.: Didaktika fyziky, SPN Praha, 1978 4.E. Mechlová: Didaktika fyziky 1, 2, PdF Ostrava, 1989 5.J. Fenclová: Úvod do teórie a metodológie didaktiky fyziky, SPN Praha, 1982 6.Vachek, J. a kol.: Fyzika pre 1. ročník gymnázia. SPN, Bratislava, 1984. 7.Svoboda, E. a kol. Fyzika pre 2. ročník gymnázia. SPN, Bratislava, 1985.	

8.Lepil, O. a kol.: Fyzika pre 3. ročník gymnázia. SPN, Bratislava, 1986.  
 9.Pišút, J. a kol.: Fyzika pre 4. ročník gymnázia. SPN, Bratislava, 1987.  
 10.Scholtz, E., Kireš, M.: Fyzika - Kinematika pre osemročné gymnáziá, SPN, Bratislava, 2001, 104 strán, ISBN 80-08-02848-3  
 11.Blaško, M., Gajdušek, J., Kireš, M., Onderová, Ľ.: Molekulová fyzika a termodynamika pre osemročné gymnáziá, SPN, Bratislava, 2004, 120 strán, ISBN 80-10-00008-6  
 12.Scholtz, E., Kireš, M.: Fyzika - Dynamika pre osemročné gymnáziá, SPN, Bratislava, 2007, 231 strán, ISBN 80-10-00013-2  
 School textbooks for Physics education at upper secondary level

**Course language:**

Slovak, English

**Notes:**

**Course assessment**

Total number of assessed students: 12

A	B	C	D	E	FX
83.33	16.67	0.0	0.0	0.0	0.0

**Provides:** doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančinová, Ph.D.

**Date of last modification:** 03.05.2015

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ DIN1a/15	<b>Course name:</b> Didactics of informatics
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: 1. Proposal of a thematic plan for teaching informatics at secondary or elementary school extended by 1 disponible hour. 2. Creation of a concept map and specific educational objectives for selected topic of school informatics. 3. Creation of a graded system of tasks for teaching selected topic of school informatics. 4. Proposal for the preparation of a lesson with a 5E inquiry cycle. Conditions for successful completion of the course: Obtaining at least 50% of points for ongoing assignments.	
<b>Learning outcomes:</b> After completing this course, students are able to: a) acquire an overview of the objectives, content, modern methods and aids for teaching school informatics, b) create conceptual map, cognitive objectives and graded tasks collection for selected topic of school informatics, c) create a inquiry-based methodology of teaching a selected topic of school informatics.	
<b>Brief outline of the course:</b> 1. Objectives and content of teaching informatics in primary and secondary schools. State educational program. Informatics textbooks. 2. Maturita on informatics. Examples of school educational programs. Designing own thematic plan. 3. Logical structure of the curriculum, conceptual mapping. Determination of specific educational objectives and creation of a concept map for a selected topic of school informatics (RBT). 4. Educational task, its forms, and parameters. A graded system of tasks. 5. Creation of a graded system of tasks for teaching a selected topic of school informatics. 6. Activating methods of teaching school informatics (discussion and situational methods). 7. Activating methods of teaching school informatics (staging methods, educational games, scientific humor). 8. Activating methods 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](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: 69

A	B	C	D	E	FX
27.54	15.94	23.19	20.29	11.59	1.45

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

**Date of last modification:** 01.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ DIN1b/15	<b>Course name:</b> Didactics of informatics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: <ol style="list-style-type: none"> <li>1. Creation of an interactive educational aid.</li> <li>2. Microteaching with a sample solution of an algorithmic problem.</li> <li>3. Assessment of administered didactic test.</li> <li>4. Creation of an assignment and a commented author's solution of the STEAM task for the PALMA junior competition, correction, and assessment of student solutions.</li> </ol> Conditions for the final evaluation: <ol style="list-style-type: none"> <li>1. Elaboration of a final paper focused on the conceptual process, creation of assignments with various didactic functions, naming misconceptions, and assessment of learning outcomes of selected topics of school informatics.</li> <li>2. Presentation of own teacher's portfolio with discussion.</li> </ol> Conditions for successful completion of the course: Obtaining at least 50% of points for ongoing and final assignments.	
<b>Learning outcomes:</b> After completing this course, students are able to: <ol style="list-style-type: none"> <li>a) select and explain essential concepts for a selected topic of school informatics,</li> <li>b) create and present an assignment and a sample solution to an algorithmic problem,</li> <li>c) analyze and assess students' assignments and identify their misconceptions,</li> <li>d) design and discuss the methodology of teaching a selected topic of school informatics, which includes its own interactive teaching aid,</li> <li>e) complete your own teaching portfolio.</li> </ol>	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Assessment of students' learning outcomes in school informatics. Didactic tests.</li> <li>2. Assessment of student projects. Student portfolio.</li> <li>3. Conceptual process in school informatics.</li> <li>4. Informatics concepts in informatics competitions (iBobor).</li> <li>5. Informatics concepts in activities outside the computer (Computer Science Unplugged).</li> <li>6. Methodology of teaching selected topics in the field of Representation and tools (coding, compression).</li> </ol>	

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, maturity 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\\_ulo\\_h\\_a\\_hodnotenie.pdf](https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/tvorba_ulo_h_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](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](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](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: 151

A	B	C	D	E	FX
17.88	33.77	23.84	15.89	7.95	0.66

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

**Date of last modification:** 01.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ DPP1/14	<b>Course name:</b> Diploma Project I
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 9	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ DPP1/14	<b>Course name:</b> Diploma Project I
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> regular consultations with diploma thesis supervisor about the progress of diploma project development, design of investigation plan	
<b>Learning outcomes:</b> Student has studied the theoretical background, formulates research questions, has designed investigation plan, has presented first results, eventually.	
<b>Brief outline of the course:</b> Development of diploma project	
<b>Recommended literature:</b> Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 10	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ DPP2/14	<b>Course name:</b> Diploma Project II
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> regular consultaions with diploma thesis supervisor about the progress of diploma project development and about the investigation regular consultations study of available resources connected with the diploma thesis assignments first results	
<b>Learning outcomes:</b> Student understands the methods of investigation and he gains first results.	
<b>Brief outline of the course:</b> Work on the diploma project with regard to the assignemnts of the diploma thesis	
<b>Recommended literature:</b> Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 10	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ DPP2/14	<b>Course name:</b> Diploma Project II
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 9	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b>	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ DPP3/14	<b>Course name:</b> Diploma Project III
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> regular consultations with diploma thesis supervisor about the progress of diploma project development and about the project results	
<b>Learning outcomes:</b> Student has enough knowledge to prepare a theoretical part of the diploma thesis and for practical part based on the problem analysis and drawing conclusions.	
<b>Brief outline of the course:</b> Work on the project with regard to the diploma thesis assignments	
<b>Recommended literature:</b> Recommended literature that is included in the diploma thesis assignments Regulations for diploma thesis preparation template for diploma thesis	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 18	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ DPP3/14	<b>Course name:</b> Diploma Project III
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 4	
abs	n
100.0	0.0
<b>Provides:</b>	
<b>Date of last modification:</b>	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/ DPOU/14		<b>Course name:</b> Diploma Thesis and its Defence			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 15					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Preparation and submission of diploma thesis in printed and electronic form. Presentation of diploma thesis results and its defence in front of examination board.					
<b>Learning outcomes:</b> Knowledge and skills connected with selected problem analysis and presentation of diploma thesis results in front of experts.					
<b>Brief outline of the course:</b> Preparation and submission of diploma thesis to central registration system. Printed version for reviewing. Presentation of diploma thesis results and answers to the questions of reviewrs. Discussion on the content of diploma thesis and answers to the questions of examination board members.					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 18					
A	B	C	D	E	FX
77.78	11.11	11.11	0.0	0.0	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/PUDU/15	<b>Course name:</b> Drug Addiction Prevention in Educational Practice
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> 1st part of the semester evaluation: active participation in the training part (30p). 2nd part of the semester evaluation: active participation in workshops (20p) 3rd part of the semester evaluation - preparation (10p) and implementation (10p) of block activities (20p, minimum 11 points). 4th part of the evaluation - written knowledge exam (20p, minimum 11 points). In total, students can get 90p and the final grade is as follows: 90 - 82: A 81 - 73: B 72 - 66: C 65 - 59: D 58 - 54: E 53 and less: FX. Detailed information in the electronic bulletin board of the course in AIS2. The teaching of the subject will be realized by a combined method.	
<b>Learning outcomes:</b> The student understands principals of research data based prevention of risk behavior, can describe and explain the determinants of risk behavior as well as protective and risk factors for substance use. Understands and adequately interprets the theory explaining the background of substance and non-substance addictions. The student is also able to state and classify the types and forms of prevention, strategies and approaches in prevention, can distinguish effective strategies from ineffective ones. The student is able to apply the learned rules, procedures and competencies for the work of a teacher in the field of drug use prevention, as well as the acquired professional skills for the work of a teacher and prevention coordinator at school.	
<b>Brief outline of the course:</b> Psychological, pedagogical-psychological, medical and legal-forensic aspects of substance use prevention Prevention of substance use based on risk and resilience Primary, secondary and tertiary prevention of substance use Universal, selective and indicated prevention of substance use Effective substance prevention strategies based on research data Preparation and implementation of components of effective substance use prevention programs	
<b>Recommended literature:</b> Orosová, O. a kol. (2012). Základy prevencie užívania drog a problematického používania internetu v školskej 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.					
<b>Course language:</b> slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 321					
A	B	C	D	E	FX
50.78	40.19	8.1	0.93	0.0	0.0
<b>Provides:</b> prof. PhDr. Oľga Orosová, CSc., Mgr. Marta Dobrowolska Kulanová, PhD., Mgr. Lucia Barbierik, PhD., Mgr. Lenka Abrinková, Mgr. Frederika Lučanská, Mgr. Viera Čurová, Mgr. Marcela Štefaňáková, PhD.					
<b>Date of last modification:</b> 25.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPPaPZ/VP/09		<b>Course name:</b> Educational Counselling			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 162					
A	B	C	D	E	FX
66.05	20.99	8.02	3.7	1.23	0.0
<b>Provides:</b> PhDr. Anna Janovská, PhD.					
<b>Date of last modification:</b> 28.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/ ZSP/15		<b>Course name:</b> Essentials of Special Education			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 429					
A	B	C	D	E	FX
54.55	26.34	13.05	4.66	1.17	0.23
<b>Provides:</b> PaedDr. Michal Novocký, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/ ZZP/12		<b>Course name:</b> Experiential Education			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 2 <b>Per study period:</b> 14 / 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 4					
<b>Recommended semester/trimester of the course:</b> 1., 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 299					
A	B	C	D	E	FX
47.16	37.12	13.71	2.01	0.0	0.0
<b>Provides:</b> doc. PaedDr. Renáta Orosová, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/FO1/15		<b>Course name:</b> Formal languages and automata			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 5					
<b>Recommended semester/trimester of the course:</b> 1., 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> To provide theoretical background for studying computer science in general, by giving the necessary knowledge in theory of automata.					
<b>Brief outline of the course:</b> Greibach normal structure of contextfree gramars. Deterministic pushdown automata. Context-sensitive grammars and linearly-bounded Turing machines. Deterministic linearly-bounded Turing machines. Space bounded machines. Phrase-structure grammars and Turing machines. Post correspondence problem. Undecidable problems in the theory of formal languages.					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 11					
A	B	C	D	E	FX
36.36	36.36	18.18	9.09	0.0	0.0
<b>Provides:</b> prof. RNDr. Viliam Geffert, DrSc., Mgr. Alexander Szabari, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ VBF2/15	<b>Course name:</b> General Biophysics II
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Exam	
<b>Learning outcomes:</b> To provide information about the object, significance and role of biophysics in science. The main emphasis will be given on the understanding of the principles determining the structure and function of the most important biological structures (nucleic acids, proteins, biomembranes) as well as on the thermodynamics and kinetics of selected chemical and biophysical processes.	
<b>Brief outline of the course:</b> The definition of biophysics and its role in the science. Intra- and inter-molecular interactions in biological systems. Function and structure of the important biomacromolecules (nucleic acids, proteins, biomembranes, sugars). Conformational transitions in biopolymers: helix-coil transition in DNA, denaturation of proteins, phase transitions in biomembranes. Thermodynamics of biological processes. Gibbs energy and chemical equilibrium, chemical potential, binding constants of the ligand-macromolecule interactions, cooperativity of the binding between biological important molecules, membrane potential. Kinetics of the chemical and biophysical processes. The principles of chemical kinetics, enzymatic reactions, inhibition of the enzymes, membrane transport, introduction to the pharmacokinetics. Cell biophysics. The basic bioenergetic processes, oxidative phosphorylation, photosynthesis. Mechanisms of regulations and control processes in cells-the basic principles. Medicinal biophysics. Biophysical principles of selected diagnostic and therapeutical methods. Radiation and environmental biophysics. The influence of physico-chemical factors of the environment on the living systems.	
<b>Recommended literature:</b> 1. M. B. Jackson, Molecular and cellular biophysics, Cambridge University Press, 2006. 2. M. Daune, Molecular biophysics-Structures in motion, Oxford University Press, 2004. 3. R. Glaser, Biophysics, Springer Verlag, 2001. 4. M.V. Volkenštein, Biofizika, Nauka, Moskva 1988. 5. W.Hoppe and W. Lohmann, Biophysics, Springer Verlag, 1988.	

6. K.E.van Holde, W.C. Johnson and P. Shing Ho, Principles of physical biochemistry, Simon and Schuster, Prentice Hall, 1998. 7. D.G. Nichols and S.J. Ferguson, Bioenergetics 3, Academic Press, Elsevier Science Ltd., 2002.					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 9					
A	B	C	D	E	FX
22.22	44.44	11.11	11.11	11.11	0.0
<b>Provides:</b> doc. Mgr. Daniel Jancura, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ DEJ1/99	<b>Course name:</b> History of Physics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> term project examination	
<b>Learning outcomes:</b> Basic facts in the history of physics.	
<b>Brief outline of the course:</b> 1.-2. Evolution of knowledge before Galileo. 3.-4. Evolution of physics within the mechanical picture of the world. 5.-6. Evolution and limits of classical physics, phase of breakthrough in physics. 7.-8. Origin and evolution of the theory of relativity. Quantum physics and prospects of further evolution of physics and their application. 9.-10. Atomic and nuclear physics. 11.-12. Subnuclear physics. Contemporary state of physical research and its application in technology, natural sciences and philosophy. Position of physics in our society.	
<b>Recommended literature:</b> 1. R.Zajac, J.Chrapan: Dejiny fyziky, skriptá, MFF UK, Bratislava, 1982. 2. V.Malíšek: Co víte o dějinách fyziky, Horizont, Praha, 1986. 3. I.Kraus, Fyzika v kulturních dějinách Evropy, Starověk a středověk, Nakladatelství ČVUT, Praha, 2006. 4. A.I.Abramov: Istoria jadernoj fiziky, KomKniga, Moskva, 2006. 5. L.I.Ponomarev: Pod znakom kvanta, Fizmatlit, Moskva, 2006. 6. I.Kraus, Fyzika v kulturních dějinách Evropy, Od Leonarda ke Goethovi, Nakladatelství ČVUT, Praha, 2007. 7. I.Kraus, Fyzika od Thaléta k Newtonovi, Academia, Praha, 2007. 8. I.Štoll, Dějiny fyziky, Prometheus, Praha, 2009. 9. www-pages. 10.Brandt S., The harvest of a century, Discoveries of modern physics in 100 episodes, Oxford, 2009.	
<b>Course language:</b>	

slovak and english					
<b>Notes:</b>					
<b>Course assessment</b>					
Total number of assessed students: 35					
A	B	C	D	E	FX
82.86	8.57	8.57	0.0	0.0	0.0
<b>Provides:</b> prof. RNDr. Stanislav Vokál, DrSc., doc. RNDr. Janka Vrláková, PhD.					
<b>Date of last modification:</b> 06.08.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/TIK1/15		<b>Course name:</b> Information theory, encoding			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 4					
<b>Recommended semester/trimester of the course:</b> 1.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 88					
A	B	C	D	E	FX
64.77	11.36	12.5	3.41	0.0	7.95
<b>Provides:</b> prof. RNDr. Stanislav Krajčí, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ VIV1/15	<b>Course name:</b> Internet in education
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 2 <b>Per study period:</b> 14 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Assessment of preliminary assignments - design of a teleproject, design of an e-learning course lesson, design and implementation of a video-conference activity. In final exam students will demonstrate an overview of using the Internet in education in written form and they will present and defend their final work focused on using the Internet in education (design and implementation of an e-learning course, teleproject, webquest, on-line competition, lesson exploiting several Internet sources and tools).	
<b>Learning outcomes:</b> 1. To acquire an overview of the possibilities of using the Internet in education. 2. To enhance skills for searching, acquiring, exchanging and presenting information via the Internet. 3. To design, develop and verify an Internet activity (e-learning course, teleproject, WebQuest, online competition, video lecture).	
<b>Brief outline of the course:</b> Overview of using the Internet in education. Educational Web sites and search engines. Design, implementation and evaluation of e-learning courses. Educational teleprojects, online competitions, teleexperiments. Communicating via the Internet - forums, blogs, videoconferences, social networking. Social, medical, ethical and legal aspects of using the Internet.	
<b>Recommended literature:</b> 1. CONRAD, Rita-Marie - DONALDSON, J. Ana (2011). Engaging the Online Learner: Activities and Resources for Creative Instruction. Jossey-Bass; Updated Edition edition 2011. ISBN 978-1118018194. 2. FREEDMAN, Terry (2010) The Amazing Web 2.0 Projects Book. <a href="http://www.terry-freedman.org.uk/web2_2010/Amazing%20Web%202%20Projects%20%20online%20version.pdf">http://www.terry-freedman.org.uk/web2_2010/Amazing%20Web%202%20Projects%20%20online%20version.pdf</a> 3. MANN, B. L. Selected Styles in Web-based Educational Research. Information Science Pub, 2005. ISBN 15-9140-732-X. 4. BARANOVIČ, R. et al. Internet pre stredné školy - Učebnica Internetu. Praha : Computer Press, 2003. 275 s. ISBN 80-251-0088-X.	

<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b>					
Total number of assessed students: 152					
A	B	C	D	E	FX
15.13	33.55	21.05	14.47	12.5	3.29
<b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD., PaedDr. Ján Guniš, PhD.					
<b>Date of last modification:</b> 01.04.2020					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/UPN/17	<b>Course name:</b> Introduction into Psychology of Religion
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> The assessment is based on the interim evaluation. The subject will be taught in both present and distance format. Up-to-date information concerning the subject for the given academic year can be found on the electronic board of the subject in the Academic information system of the UPJŠ.	
<b>Learning outcomes:</b> The aim of the subject is to gain a basic overview of the origin and current state of knowledge in the field of research and application of the psychology of religion. Students will acquire basic knowledge need for orientation in the field and emphasis will be given to individual reflection and critical thinking as well as application of already acquired knowledge from other (psychological) disciplines.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. History of psychology of religion in national and world context</li> <li>2. Psychological perspective on religion and religious experience</li> <li>3. Psychology of religion in an interdisciplinary context</li> <li>4. Basic approaches to psychological interpretation and selected views</li> <li>5. Different types of religious experience</li> <li>6. Psychological view of religion from a biodynamic perspective</li> <li>7. Spirituality versus religiosity in a postmodern society</li> <li>8. Coping in the context of religiosity</li> <li>9. Psychotherapy and religion, pastoral psychology</li> </ol>	
<b>Recommended literature:</b> Eliade, M. (1994). Posvátné a profánní. Praha: Česká křesťanská akademie. Eliade, M. (1995). Dějiny náboženského myšlení 1. Praha: Oikymen. Freud, S. (1999). Nutkavá jednání a náboženské úkony. In Freud, S., Spisy z let 1906–1909. Praha: Psychoanalytické nakladatelství. Fromm, E. (2003). Psychoanalýza a náboženství. Praha: Aurora Erikson, E. (1996). Mladý muž Luther: studie psychoanalytická a historická. Praha: Psychoanalytické nakladatelství. James, W. (1930). Druhy náboženské zkušenosti. Praha: Melantrich. Jung, C. G. (1993). Analytická psychologie: Její teorie a praxe. Praha: Academia.	

Křivohlavý, J. (2000). Pastorační 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					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 25					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b> Mgr. Jozef Benka, PhD. et PhD.					
<b>Date of last modification:</b> 25.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/ UGR1/15		<b>Course name:</b> Introduction to computer graphics			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 5					
<b>Recommended semester/trimester of the course:</b> 1., 3.					
<b>Course level:</b> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> To provide the students with knowledge of graphics algorithms and basic principles of computer graphics.					
<b>Brief outline of the course:</b> Graphics hardware, input and output devices. Color models, palettes. Raster graphics algorithms for drawing 2D primitives. Filling and clipping. Curve modeling, interpolations and approximations, spline forms, Bézier curves, B-splines, surfaces. Homogenous coordinates, affine transformations, perspective and parallel projections. Visible-surface determination, illumination and shading. Rendering techniques, photorealism, textures, ray tracing, radiosity. Object representations, computer animation, virtual reality.					
<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					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 297					
A	B	C	D	E	FX
13.8	10.44	13.8	23.57	29.97	8.42
<b>Provides:</b> doc. RNDr. Jozef Jirásek, PhD., RNDr. Rastislav Krivoš-Belluš, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ UNS1/15	<b>Course name:</b> Introduction to neural networks
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> The condition for passing the course is the realization of a project with the application of neural networks, successful completion of two written tests in the field of neural networks and genetic algorithms, as well as successful completion of the written and oral part of the exam.	
<b>Learning outcomes:</b> The result of the education is an understanding of the basic principles of neural networks and genetic algorithms. The student will gain the ability to apply the acquired knowledge in intelligent data analysis and also work with a selected tool for modeling neural networks.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Basic concept arising from biology. Linear threshold units, polynomial threshold units, functions calculable by threshold units.</li> <li>2. Perceptrons. Linear separable objects, adaptation process (learning), convergence of perceptron learning rule, higher order perceptrons.</li> <li>3. Forward neural networks, hidden neurons, adaptation process (learning), backpropagation method.</li> <li>4. Recurrent neural networks. Hopfield neural networks, properties, associative memory model, energy function, learning, optimization problems (business traveler problem).</li> <li>5. Model of gradually created network. ART network, architecture, operations, initialization phase, recognition phase, search and adaptation phase. Use of the ART network.</li> <li>6. Applications of studied models in solving practical problems.</li> <li>7. Written test I.</li> <li>8. Motivation to model genetic elements. Genetic algorithm. Application of genetic algorithms.</li> <li>9. Genetic programming, root trees, Read's linear code. Basic stochastic optimization algorithms: blind algorithm and climbing algorithm. Forbidden search method.</li> <li>10. Genetic and evolutionary programming with typing, examples of use. Grammatical evolution.</li> <li>11. Special techniques of evolutionary computations. Selection mechanisms in evolutionary algorithms.</li> <li>12. Use of genetic algorithms in training neural networks. Artificial life.</li> <li>13. Written test II.</li> </ol>	
<b>Recommended literature:</b>	

1. AGGARWAL, Charu C. Neural networks and deep learning: a textbook. Cham: Springer, 2018. ISBN 978-3319944623. 2. KVASNIČKA, Vladimír. Úvod do teórie neurónových sietí. [Slovenská republika]: IRIS, 1997. ISBN 80-88778-30-1. 3. KVASNIČKA, Vladimír. Evolučné algoritmy. Bratislava: Vydavateľstvo STU, 2000. Edícia vysokoškolských učebníc. ISBN 80-227-1377-5. 4. MITCHEL, Melanie. An Introduction to Genetic Algorithms. Cambridge: MIT Press, 2002. ISBN 0-262-63185-7. 5. SINČÁK, Peter, ANDREJKOVÁ, G. Úvod do neurónových sietí, I. diel, Košice: ELFA, 1996. ISBN 808878638X					
<b>Course language:</b> Slovak or English					
<b>Notes:</b> Content prerequisites: Basics of programming in Python, or another alternative programming language suitable for data analysis					
<b>Course assessment</b> Total number of assessed students: 439					
A	B	C	D	E	FX
14.12	17.08	22.55	19.13	22.78	4.33
<b>Provides:</b> RNDr. Ľubomír Antoni, PhD., RNDr. Šimon Horvát					
<b>Date of last modification:</b> 26.08.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/ LOP1/15		<b>Course name:</b> Logic programming			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 5					
<b>Recommended semester/trimester of the course:</b> 2., 4.					
<b>Course level:</b> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> To learn bases of declarative programming (as complementary method to procedural programming) and basic methods of implementations of logic programming languages.					
<b>Brief outline of the course:</b> Facts and rules in Prolog. Unification of terms (Robinson's unification algorithm). Recursion and backtrack in Prolog. Computational step and computational tree. Classification of terms. Lists. Functors and operators in composed terms. Predicates for input and output. Dynamic database. Cycles (repeat-fail, for). Predicates related to backtrack. Cut. Predicates evaluating of arithmetic expressions.					
<b>Recommended literature:</b> Bratko, I.: Prolog – programming for artificial intelligence, third edition. Addison-Wesley, 2001 Nilsson U., Maluszynski J.: Logic, Programming and Prolog, John Wiley & Sons Ltd. 1995 Nienhuys-Cheng Sh.H., Wolf R.: Foundations of Inductive Logic Programming, Springer-Verlag, 1997					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 284					
A	B	C	D	E	FX
22.18	12.68	14.08	24.3	25.0	1.76
<b>Provides:</b> doc. RNDr. Ondrej Krídlo, PhD., prof. RNDr. Stanislav Krajčí, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ FEP1/07	<b>Course name:</b> Microcomputer Based Science Laboratory
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 1 / 2 <b>Per study period:</b> 14 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> test 30 points active participation 10 points project (development of mathematical model, videomeasurement and physical experiment) 60 points The final assessment is based on the sum of partial results	
<b>Learning outcomes:</b> After the course student gains an overview about the possible use of digital technologies to support active learning in science. He gains skills to use and develop activities on measuring data with the help of datalogging, measuring on picture and viderecording and modeling natural processes. Student is able to implement such activities in science teaching to support active learning and conceptual understanding.	
<b>Brief outline of the course:</b> The aim of the course is to present the use of digital technologies to enhance active learning in science with the help of datalogging, videomeasurement and modeling tools. Mathematical modeling is based on dynamical modeling of natural phenomena. Within the course students carry out computer-based experiments, videomeasurements and measurement on picture and create corresponding models. The activities involve selected topics of secondary schools science. The emphasize is put on the methods of implementation of the activities with regard to active students' learning.	
<b>Recommended literature:</b> [1]Koubek, V., Pecen, I.: Fyzikálne experimenty a modely v školskom mikropočítačom podporovanom laboratóriu, Univerzita Komenského, Bratislava, 1999 [2]Príručka COACH [3] <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 34					
A	B	C	D	E	FX
44.12	44.12	11.76	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Zuzana Ješková, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/SNP/09	<b>Course name:</b> Mobbing, Violence and Their Prevention
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Active participation in seminars. Detailed information will be given. Active participation - 20% Seminar work - 40% Seminar work 2 - 40%	
<b>Learning outcomes:</b> The student will acquire the latest information about bullying in schools and its consequences, about solving problematic situations associated with bullying as well as about possible ways of prevention. Within the seminars, students will develop professional skills through the implementation of prevention activities. At the same time, their sensitivity to the issue of bullying and their willingness to actively address it during their pedagogical practice will increase.	
<b>Brief outline of the course:</b> Aggressive behavior. Characteristics of actors of bullying (personality, characteristics of family environment). Manifestations and possible causes of bullying. Bullying as a group process. The role of teacher, school and parent in solving bullying. Possibilities of prevention of bullying at the level of school, class, individuals. Primary, secondary and tertiary prevention. Socio-psychological activities used in the prevention of bullying.	
<b>Recommended literature:</b> Kolář, M.: Bolest šikanování. Cesta k zastavení epidemie šikanování ve školách. Portál, Praha, 2001 Jánošová a kol. Psychologie školní šikany. Grada, Praha, 2016 Říčan, P.: Agresivita a šikana mezi dětmi. Portál, Praha, 1995	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 143					
A	B	C	D	E	FX
80.42	17.48	1.4	0.7	0.0	0.0
<b>Provides:</b> Mgr. Mária Bačíková, PhD.					
<b>Date of last modification:</b> 24.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ MDT06/19	<b>Course name:</b> Modern Didactical Technology
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2., 4.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> All assignments must be uploaded by a student and accepted by a teacher according to assessment criteria. Active participation at the seminar with minimum 80% participation.	
<b>Learning outcomes:</b> Student graduated from subject will be able: - recognise basic tools for teaching activities, - to use all types of actual tools in education of science or humanities, - to design and realise educational activities by using modern technologies.	
<b>Brief outline of the course:</b> 0. Introduction 1. Cloud services 2. Digital notebooks 3. Digital imaging 4. Digital image processing 5. Digital text processing 6. Digital audio processing 7. Digital video, processing, videoconferencing 8. Google online services 9. Interactive didactical system (whiteboard, e-voting system, tablet) 10. Computer based laboratories 11. Digital technologies and virtual experiments 12. Digital teacher's workspace	
<b>Recommended literature:</b> 1. Kireš, M. et al.: Modern didactical technics in teacher practice, Košice: Elfa, 2010, ISBN 788080861353 2. actual information from web sites related to didactical technologies, 3. catalogues of teaching tools, 3. actual articles about modern trends in science and humanities education.	

<b>Course language:</b> Slovak, English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 59					
A	B	C	D	E	FX
38.98	40.68	13.56	3.39	3.39	0.0
<b>Provides:</b> doc. RNDr. Jozef Hanč, PhD.					
<b>Date of last modification:</b> 31.03.2020					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/MFDF/15	<b>Course name:</b> Modern Physics from Didactics Point of View
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Active participation; completing reading assignments; realization of a chosen modern physics project with a practical application. Exam and defending own project	
<b>Learning outcomes:</b> 1. Achieving better conceptual understanding and getting an integrated view on fundamental ideas of contemporary modern physics, which every future physicist and physics teacher should have. Emphasis is not on abstract mathematical methods, but on using most recent knowledge and tools of Physics Education Research - computer modeling of physical phenomena and employing only elementary algebra and calculus. 2. Getting physical intuition and experience dealing with practical applications of modern physics.	
<b>Brief outline of the course:</b> 1. Fundamental ideas of modern mechanics: symmetry, event, worldline, spacetime diagram, principle of least action, conservation laws; practical applications. 2. Fundamental ideas of relativity: principle of relativity, space-time interval, conservation of momentum, metrics, principle of maximal aging; practical applications. 3. Fundamental ideas of quantum mechanics: probability amplitude, principle of democracy of histories, rules for amplitudes, propagator, Schrödinger's equation, stationary state, Feynman's diagrams; practical applications.	
<b>Recommended literature:</b> 1. Moore, T. A, Six Ideas That Shaped Physics - Unit C and Q, 2nd ed., Mc Graw Hill, Boston, 2003 2. Feynman, R.P., QED - The Strange theory of Light and Matter, Princeton University Press, Princeton, 1985 3. Hey, A., Walters, P., New Quantum Universe, Cambridge University Press, 2003 4. Taylor, E. F, Wheeler, J. A., Space-time Physics-Introduction to Special Relativity, 2nd ed., W.H. Freeman and Company, New York, 1992 5. Thorne, K. S., Black Holes and Time Warps, W.W. Norton, New York, 1995 6. Relevant resources from recent journal literature (American Journal of Physics, European Journal of Physics, Scientific American...)	

<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 3					
A	B	C	D	E	FX
33.33	33.33	33.33	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Jozef Hanč, PhD.					
<b>Date of last modification:</b> 02.05.2017					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/PDK/17		<b>Course name:</b> Pedagogical Communication			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 1.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 65					
A	B	C	D	E	FX
73.85	23.08	3.08	0.0	0.0	0.0
<b>Provides:</b> PaedDr. Michal Novocký, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/ PDD/17		<b>Course name:</b> Pedagogical Diagnostics			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 45					
A	B	C	D	E	FX
84.44	8.89	6.67	0.0	0.0	0.0
<b>Provides:</b> PaedDr. Michal Novocký, PhD.					
<b>Date of last modification:</b> 08.06.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPE/PPD/15	<b>Course name:</b> Pedagogy and Psychology
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> II.	
<b>Prerequisites:</b> KPE/PDU/15,KPPaPZ/PPgU/15	
<b>Conditions for course completion:</b> Obtaining the required number of credits in the prescribed composition by the study plan.	
<b>Learning outcomes:</b> Verification of the acquired competencies of the student in accordance with the profile of the graduate.ie required number of credits in the prescribed composition by the study plan.	
<b>Brief outline of the course:</b> 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 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, the 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 pedagogical-psychological research - questionnaire, interview, observation and possibilities of their use in school practice.

### **Recommended literature:**

#### **Pedagogika:**

- Čapek, R. (2016). Moderní didaktika. Praha: Grada.  
 Dytrtová, R., Krhutová, M. (2009). Učitel. Příprava na profesi. Praha: Grada.  
 Kalhous, Z., Obst, O. (2002). Školní didaktika. Praha: Portál.  
 Petlák, E. (2016). Všeobecná didaktika. Bratislava: Iris.  
 Petlák, E. (2005). Kapitoly zo súčasnej didaktiky. Bratislava: IRIS.  
 Prucha, J. (2017). Moderní pedagogika. Praha: Portál.  
 Turek, I. (2014). Didaktika. Bratislava: Wolters Kluwer.  
 Vališová, A., Kasíková, H. (2010). Pedagogika pro učitele. Praha: Grada.  
 Zormanová, L. (2014). Obecná didaktika. Praha: Grada.

#### **Psychológia:**

- Mareš, J. (2013). Pedagogická psychologie. Praha : Grada.  
 Mareš, J., ČÁP, J. (2001). Psychologie pro učitele. Praha: Portál.  
 Džuka, J. (2003). Základy pedagogickej psychológie. Prešov: UK.  
 Orosová, O. a kol. (2005). Psychológia a pedagogická psychológia 1. Košice: UPJŠ.  
 Orosová, O. a kol. (2012). Základy prevencie užívania drog a problematického používania internetu v školskej praxi. Košice: UPJŠ.  
 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. Dostupné online na [www.e-metodologia.fedu.uniba.sk](http://www.e-metodologia.fedu.uniba.sk).  
 Vágnerová, M. (2005). Základy psychológie. Praha : Karolinum.  
 Vágnerová, M. (2005). Vývojová psychológia. Praha : Karolinum.  
 Vágnerová, M. (2005). Škoní podadenská psychologie pro pedagogy. Praha : Karolinum.  
 Výrost, J., Slaměník, I. (2008). Sociální psychologie. Praha : Grada.  
 Výrost, J., Salměník, I. (1998). Aplikovaná sociální psychologie I. Praha: Portál. Strana: 2  
 Fontana, D. (1997). Psychologie ve školní praxi. Praha: Portál.  
 Zelina, M. (2011). Stratégie a metódy rozvoja osobnosti dieťaťa: (metódy výchovy). Bratislava, Iris.  
 Křivohlavý, J. (2004). Pozitivní psychologie. Praha: Portál.  
 Křivohlavý, J. (2003). Psychologie zdraví. Praha: Portál.

<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b>					
Total number of assessed students: 508					
A	B	C	D	E	FX
28.35	27.17	25.98	15.16	3.15	0.2
<b>Provides:</b>					
<b>Date of last modification:</b> 07.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ FPK1/15	<b>Course name:</b> Phase Transitions and Critical Phenomena
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Evaluation	
<b>Learning outcomes:</b> To acquaint students with based problems of the phase transitions and critical phenomena.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Thermodynamics and phase transitions.</li> <li>2. Conditions of stability of the equilibrium state of the magnetic system.</li> <li>3. Phase equilibrium, phase transitions. Clausius-Clapeyron equation.</li> <li>4. Classical (Ehrenfest) classification of phase transitions: phase transitions of the first and second kind.</li> <li>5. Landau's description of phase transitions of the second kind.</li> <li>6. Critical indices, universality. Definition of critical indices for the magnetic system. Thermodynamic relations between critical indices.</li> <li>7. Basic microscopic models of magnetic phase transitions. Heisenberg and Ising model.</li> <li>8. Exact solutions of microscopic models: one-dimensional and two-dimensional Ising model.</li> <li>9. Thermodynamic functions for a one-dimensional Ising model.</li> <li>10. Some approximate methods of solving the Ising model.</li> <li>11. Phenomenological theory of phase transitions.</li> <li>12. Landau's theory of phase transitions.</li> </ol>	
<b>Recommended literature:</b> Basic literature: - A. Bobák, Phase Transitions and Critical Phenomena, Project 2005/NP1-051 11230100466, European Social Fund, Košice 2007. - Stanley H.G.: Introduction to Phase Transitions and Critical Phenomena, Clarendon Press Oxford, 1971. Other literature: - Reichl L.E.: A Modern Course in Statistical Physics, University of Texas Press, Austin, 1980. - Plischke M., Bergersen B.: Equilibrium Statistical Physics, World Scientific, Singapore, 1994. - Kadanoff L.P.: Statistical Physics, Statistics, Dynamics and Renormalization, World Scientific, Singapore, 2000.	

<b>Course language:</b> Slovak, English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 44					
A	B	C	D	E	FX
72.73	9.09	4.55	6.82	6.82	0.0
<b>Provides:</b> prof. RNDr. Milan Žukovič, PhD., prof. RNDr. Andrej Bobák, DrSc.					
<b>Date of last modification:</b> 01.07.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ FYU1/15	<b>Course name:</b> Physical Problems
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> On- line set of problems for self solving is available for students. One task is define for each seminar for testing of student preparation. Production and presentation of three own problems is necessary. problem solving 40 p obtained problem 10 p own problems 10 p oral examination 40 p Final: A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
<b>Learning outcomes:</b> Students will be ready for using of problem solving strategies at lower and upper secondary school levels. Classical problems are studied in more details from different point of view (students knowledge and skills, technologies, motivation, computer modelling and measurements).	
<b>Brief outline of the course:</b> Methods of problem solving are presented and trained. The sets of typical problems are analysed. Using of modelling and real experiments is discussed.	
<b>Recommended literature:</b> 1. Baláž, P. : Zbierka úloh z fyziky, SPN Bratislava, 1971 2. Bartuška, K.: Postup při řešení fyzikálních úloh, Sbíрка řešených úloh z fyziky pro střední školy I, Praha, Prometheus, 1997, s. 5-10. 3. Halpern, A.: 3000 solved problems in Physics, McGraw-Hill, Inc., USA, 1988 4. Janovič, J., Koubek, V. Pecen, I.: Vybrané kapitoly z didaktiky fyziky. Bratislava, UK, 1999, 5. Jurčová, M., Dohňanská, J., Pišút, J., Velmovská, K.: Didaktika fyziky – rozvíjanie tvorivosti žiakov a študentov. Bratislava, UK, 2001, 6. Kružík, M.: Sbíрка úloh z fyziky pro žáky středních škol, SPN, Praha, 1984 7. Lindner, H.: Řešené úlohy z fyziky, Alfa, Bratislava, 1973 8. Linhart, J. (1976): In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998, 9. Pietrasiński, Z. (1964): In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998,	

- 10.Scholtz, E., Kireš, M.: Fyzika – kinematika pre gymnázia s osemročným štúdiom. Bratislava, SPN, 2001,
- 11.Šedivý,P., Volf, I.: Dopravní kinematika a grafy. Hradec Králové, MAFY, 1998.
- 12.Volf,I. (1975): In: Bednařík, M., Lepil, O.: Netradiční typy fyzikálních úloh. Praha, PROMETHEUS,1995,
- 13.Volf,I.: Jak řešit úlohy fyzikální olympiády, XXIII. Ročník soutěže fyzikální olympiády ve školním roce 1981/82, Praha, SPN, 1981,
- 14.Volf,I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec Králové, MAFY, 1998.
- 15.Halpern, A.: 3000 solved problems in Physics, McGraw-Hill, Inc., USA, 1988

**Course language:**

Slovak, English

**Notes:**

**Course assessment**

Total number of assessed students: 16

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 23.01.2020

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/MSSU/15		<b>Course name:</b> Physics and Didactics of Physics			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 1					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> II.					
<b>Prerequisites:</b> (ÚFV/DF1a/15,ÚFV/FKS/15,ÚFV/SJF1/15,ÚFV/DF1b/15,ÚFV/ASFU/15)					
<b>Conditions for course completion:</b> The graduate has knowledge of physics in wider context. He is able to implement and apply knowledge of physics into education. He is able to apply knowledge of theory of education to selected physical content.					
<b>Learning outcomes:</b> Competencies in accordance with the graduate profile.					
<b>Brief outline of the course:</b> The graduate has knowledge of physics in wider context. He is able to implement and apply knowledge of physics content into education. He is able to apply knowledge of theory of education to selected physical content. Physics: Selected problems of Solid state physics, Subnuclear physics and Astrophysics. Didactics of physics: State educational curriculum ISCED 2,3-Physics. Development of scientific literacy. Physical experiment. Active learning, inquiry-based education in physics. Formative and summative assessment. Talented students and informal education. Analysis of lower and upper secondary teaching units.					
<b>Recommended literature:</b>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 10					
A	B	C	D	E	FX
70.0	20.0	0.0	10.0	0.0	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 11.04.2017					



**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ PDSI1/15	<b>Course name:</b> Pro-seminar to diploma thesis in informatics
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b> To inform students about areas of informatics they are suitable to work in diploma theses. In the end of semester students have to prepared themes of diploma theses, goals and recommended study literature.	
<b>Brief outline of the course:</b> The seminar is oriented to problems prospective to preparations of Diploma theses.	
<b>Recommended literature:</b> MEŠKO, D., KATUŠČÁK, D. Akademická príručka. 1. vyd. Vydavateľstvo Osveta : Martin, 2004. 316 s. ISBN 80-8063-150-6 ISO 690: 1987 Documentation - Bibliographic references. Content, form and structure. ISO 2145: 1978 Documentation - Numbering of divisions and subdivisions in written documents. Eco, U.: Jak napsat diplomovou práci, z taliančiny Come si fa una tesi di laures, Milano, 1977, Olomouc, Votobíax. Odborná a vedecká literatúra týkajúca sa diplomovej práce podľa odporúčania vedúceho diplomovej práce.	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 72	
abs	n
97.22	2.78
<b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPPaPZ/PASZ/17		<b>Course name:</b> Problem and Aggressive Behaviour of Pupils. Etiology, Prevention and Intervention.			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b> 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 ďalších informácií o preklade sa vyžaduje zdrojový text Odoslať spätnú väzbu Bočné panely					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 49					
A	B	C	D	E	FX
65.31	26.53	8.16	0.0	0.0	0.0
<b>Provides:</b> PhDr. Anna Janovská, PhD.					
<b>Date of last modification:</b> 28.06.2021					

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/KPE/ EPU/15	<b>Course name:</b> Professional Ethics for Teachers and School Counsellors
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2., 4.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> 1. Active participation in seminars (max. 1 absence) - 30p, 2. Preparation for the seminar - 40p, 3. Preparation (description and analysis) of the moral dilemma - 30p. By summing the points obtained during the semester, the student obtains the final evaluation according to the scale: A 87 - 100, B 77 - 86, C 69 - 76, D 61 - 68, E 56 - 60, FX 55 and less. Detailed information in the electronic board of the course in AIS2. The teaching of the subject will be realized by a combined method.	
<b>Learning outcomes:</b> The student will understand the principles of teacher ethics and the ethics of the educational counselor as one of the branch types of professional ethics. The student can theoretically reflect on the ethical and moral issues of the teaching profession and the function of the educational counselor (including the formulation of moral values, principles and standards of the teaching profession and the function of the educational counselor in the form of codes of ethics). He is able to analyze and solve practical moral problems in pedagogical practice, which supports the development of professional skills of students. The student is able to critically evaluate situations with a moral context thanks to the opportunity to discuss moral and ethical issues in an open way.	
<b>Brief outline of the course:</b> Moral emotions (theories of emotion, the center of emotions in the brain, types of emotions and their manifestations) Development of moral reasoning, cognitive approaches to moral reasoning and their comparison (Piaget, Kohlberg, Gilligan, Eisenberg, Selman, Lind), Moral behavior (from the point of view of learning theories) and moral (vs. social and emotional) intelligence in the work of a teacher Possibilities of examining moral behavior and judgment (socio-psychological research of conformity, obedience, aggression and psychodiagnostic approaches to the determination of moral judgment) Morality and professional ethics in general (ethical principles in helping professions) and codes of ethics Professional ethics of the teacher and educational counselor (terminology, concepts, main principles of teacher ethics) and 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:**

Ráčzová, 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. Profesijsná etika: FF PU. 2008.  
Miežgová J., Vargová, D. Etika. SPN Mladé letá 2007.  
Remišová A. Dejiny etického myslenia 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: 374

A	B	C	D	E	FX
95.99	3.48	0.53	0.0	0.0	0.0

**Provides:** Mgr. Lucia Barbierik, PhD.

**Date of last modification:** 25.06.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/JAC1/15	<b>Course name:</b> Programming language C
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Practices attendance and activity. Home assignment Final project.	
<b>Learning outcomes:</b> Become skilled in language C and get knowledge of the theoretical concepts that are used in the development in low-level software.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Installing and setting up the development environment. Simple program in C, compiling and running.</li> <li>2. Loops, conditions. Introduction to arrays. Numeric functions from numeric library. Compiling with `gcc` and setting up the warnings and hints.</li> <li>3. Functions. Statically allocated arrays. Array gotchas in C. Makefiles for complex projects.</li> <li>4. Basic I/O functions. Functions with array parameters and specifics.</li> <li>5. Dynamic memory allocation as a mechanism for dynamic arrays. Strings as a special case of arrays. Strings and file I/O.</li> <li>6. String manipulation principles and functions from standard library.</li> <li>7. Working with binary files.</li> <li>8. Custom data types. Structs.</li> <li>9. Dynamic data structures. Linked lists. Stacks and operations with these structs.</li> <li>10. Additional operations with dynamic data structures. Parameter passing with values and name.</li> <li>11. Useful tricks and hints: passing parameters from operating system, exit codes. Multidimensional arrays.</li> <li>12. Function pointers. Generic pointers. Unions.</li> </ol>	
<b>Recommended literature:</b> <ol style="list-style-type: none"> <li>1. KERNIGHAN, Brian W., Dennis M. RITCHIE. Programovací jazyk C. Brno: Computer Press, 2006. ISBN:802510897X.</li> <li>2. PRATA, Stephen. C Primer Plus. 6th Edition. Addison-Wesley Professional, 2014. ISBN 9780321928429.</li> <li>3. SEACORD, Robert C. Effective C: An Introduction to Professional C Programming. San Francisco, United States: No Starch Press, 2020. ISBN 9781718501041.</li> </ol>	

<b>Course language:</b> Slovak or English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 218					
A	B	C	D	E	FX
34.4	19.27	17.43	14.22	10.55	4.13
<b>Provides:</b> RNDr. PhDr. Peter Pisarčík, RNDr. Patrik Pekarčík					
<b>Date of last modification:</b> 12.07.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/PPgU/15	<b>Course name:</b> Psychology and Educational Psychology
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 5	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Combined method. Assessment Maximum 50 points during the semester (Three assignments). Exam entry criteria: Active participation in exercises and at least 35 points obtained during the semester. Continuous assessment (50%) and written examination (50%) / 10 questions. Final evaluation: A 94-100 B 93-87 C 86-80 D 79-73 E 72- 66 FX 65 -0 Electronic board of the course AIS2 - more information and news.	
<b>Learning outcomes:</b> Students will be able to show understanding of the human behaviour in educational situations. Students will be able to describe, explain and justify possible teachers' decisions by using psychological concepts, principles and theories. Students will be able to apply the psychological findings in the field of education. Students will be able to explain how adolescents learn and retain new information, to explain their behaviour in response to educational environment. Students will be able to explain the desired data-based modification of adolescents' behaviour to bring an all-round development of his personality and school performance, to explain the desired data-based modification of the behaviour of adolescents with educational problems, with disadvantages.	
<b>Brief outline of the course:</b> Introduction: The content of the course is based on current knowledge of psychological disciplines, especially pedagogical and school psychology.	

Teaching is realized by a combination of lectures with engaging narrative interpretation and seminars using interactive, experiential methods, discussion and open communication with mutual respect, support of independence, activity and motivation of students.

Syllabus: The subject and goals of psychology and educational psychology. Professional forms of help in school practice.

Implementation of psychological concepts of personality into school practice (Classical and contemporary psychoanalytic 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 psychologie 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.: Pozitivní psychologie. Praha: Portál 2004.

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

**Course language:**

slovak

**Notes:**

**Course assessment**

Total number of assessed students: 1432

A	B	C	D	E	FX
10.47	18.37	23.04	23.25	22.0	2.86

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

**Date of last modification:** 24.06.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> 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
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: 2 Per study period: 28</b> <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> 1. active participation in lessons (max. 2 absences) - 30p, 2. own output at the seminar - 40p, 3. seminar work - 30p. By summing the points obtained during the semester, the student obtains the final evaluation according to the given scale: A 87 - 100, B 77 - 86, C 69 - 76, D 61 - 68, E 56 - 60, FX 55 and less. Detailed information in the electronic board of the course in AIS2. The teaching of the subject will be realized by a combined method.	
<b>Learning outcomes:</b> The student understands the basic factors and process of creativity. The student is able to explain the specifics of working with the gifted. He knows the methods of identifying talent and also can apply methods to support creativity and the development of talent in the implementation of creative creativity in education.	
<b>Brief outline of the course:</b> The concept of creativity. A brief history of the theory of creativity. Social, psychological and biological factors of creativity. Cognitive processes in creativity. Creativity and cognitive style. Development of creativity. Talent and giftedness. Methods of determining creativity and talent. Methods of developing creativity and talent. Creativity and talent development programs. Specifics of working with the gifted children.	
<b>Recommended literature:</b> DOČKAL, V. (2006): Inteligencia a tvorivosť, tvorivé nadanie od intelektovej schopnosti po štruktúru osobnosti. In: KUSÁ, D. a kol. EDS. (2006): Zjavná a skrytá tvorivosť. Bratislava: Slovak Academic Press HRÁBKOVÁ, L. (2009): Nadání a nadaní. Pedagogicko- psychologické přístupy, modely, výzkumy a jejich vztah ke školské praxi. Praha: Grada Publishing DACEY, J.S.- LENNON, K.H. (2000): Kreativita. Praha: Grada	

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 journals

**Course language:**

slovak

**Notes:**

**Course assessment**

Total number of assessed students: 36

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Provides:** Mgr. Lucia Barbierik, PhD.

**Date of last modification:** 25.06.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/PsZ/15	<b>Course name:</b> Psychology of Health
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Active participation in seminars, preparation and presentation of seminar work, final evaluation	
<b>Learning outcomes:</b> The aim of the course is to provide students with the latest knowledge and background of Health Psychology as well as forms of its application in order to improve the mental and physical health of individuals and society. The graduate of the course will understand the principles of health psychology, will be familiar with the current social discourse on the topics covered. The student will learn to use the acquired knowledge in school practice.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Health psychology. Definition of health. Bio-psycho-social model of health.</li> <li>2. Mental health and quality of life, well being.</li> <li>3. Physiological aspects of mental health, lifestyle</li> <li>4. Stress. Coping, resilience.</li> <li>5. Psychosomatic diseases, placebo.</li> <li>6. Social support and its importance for health.</li> <li>7. Burnout syndrome.</li> <li>8. The meaning of life, faith.</li> <li>9. Health-related behavior and prevention. Risky behavior, excessive use of the Internet and screens.</li> <li>10. Socio-economic inequalities in health. Unemployment and health.</li> </ol>	
<b>Recommended literature:</b> Křivohlavý, J.: Psychologie zdraví. Praha: Portál, 2001 Kebza, V.: Psychosociální determinanty zdraví. Praha: Academia, 2005 Křivohlavý, J.: Psychologie nemoci. Praha : Grada, 2002 Sarafino, E.P.: Health Psychology: Biopsychosocial Interactions, John Wiley & Sons, 2007 Taylor, E.: Health Psychology. Singapore: McGraw-Hill, 2006 Vollrath M.E.: Handbook of Personality and Health. Chichester: John Wiley & Sons, 2006	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 81					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b> Mgr. Mária Bačíková, PhD.					
<b>Date of last modification:</b> 24.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KSSFaK/ ČGUAP/15	<b>Course name:</b> Reading Literacy in Educational Process
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 25	
abs	n
100.0	0.0
<b>Provides:</b> doc. PaedDr. Ivica Hajdučková, PhD.	
<b>Date of last modification:</b> 16.02.2019	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/ PPU1a/15	<b>Course name:</b> Running practice
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 188	
abs	n
97.34	2.66
<b>Provides:</b> Ing. Miron Kuzma, PhD.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/MPPb/15	<b>Course name:</b> Scheduled practice teaching
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> KPE/MPPa/15,KPE/PDU/15,(KPPaPZ/PaSPP/09 and leboKPPaPZ/PPgU/15)	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: 1. Observations for 11 lessons of the subject of informatics. 2. Independent leading 1 lesson from the subject of informatics. 3. Participation in 6 analyzes from lessons. 4. Participation in a reflexive colloquium with a didactician of informatics. Conditions for the final evaluation: 1. Submission of 11 observation records. 2. Submission of a project of preparation for a lesson. 3. Submission of a list of observations and own lesson of the trainee. 4. Submission of evaluation of pedagogical output of the trainee. 5. Submission of a report on ongoing pedagogical practice. Conditions for successful completion of the course: Fulfillment of all ongoing and final assignments.	
<b>Learning outcomes:</b> Students acquire knowledge by observing the practical application of teaching skills for teaching the subject of informatics and get to know the organization of school work. They also acquire their first experience with the practical implementation of a informatics lesson.	
<b>Brief outline of the course:</b> Students observe the process of teaching informatics at secondary and primary school and analysed it with teacher trainer. Practice takes place continuously during the course of the semester. Practice is scheduled once a week at the time of first to third lesson in schools. The first two lessons are students observing/teaching, the third lesson is for analysis of the first two under the guidance of a teacher trainer.	
<b>Recommended literature:</b> 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: <a href="https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667">https://publikacie.umb.sk/publication/publicationFileDownload.php?ID=18667</a>	

<p>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: <a href="https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs">https://unibook.upjs.sk/sk/pedagogika/342-pregradualna-priprava-ucitelov-organizacia-pedagogickej-praxe-na-upjs</a></p> <p>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: <a href="https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i">https://unibook.upjs.sk/sk/pedagogika/398-zacinajuci-ucitel-a-skolska-legislativa-i</a></p> <p>Current informatics textbooks for primary and secondary schools in Slovakia.</p>					
<p><b>Course language:</b> Slovak</p>					
<p><b>Notes:</b> 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.</p>					
<p><b>Course assessment</b> Total number of assessed students: 66</p> <table> <tr> <th>abs</th><th>n</th></tr> <tr> <td>100.0</td><td>0.0</td></tr> </table>		abs	n	100.0	0.0
abs	n				
100.0	0.0				
<p><b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD.</p>					
<p><b>Date of last modification:</b> 01.08.2021</p>					
<p><b>Approved:</b></p>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/MPPb/15	<b>Course name:</b> Scheduled practice teaching
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 1	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> KPE/MPPa/15,KPE/PDU/15,(KPPaPZ/PaSPP/09 and leboKPPaPZ/PPgU/15)	
<b>Conditions for course completion:</b> Student observes 11 physics lessons and leads one own physics lesson under the guidance of a teacher trainer. Confirmation of classroom visits. Written assessment made by teacher trainer.	
<b>Learning outcomes:</b> Students acquire knowledge by observing the practical applications of teaching skills for teaching the subject of physics and getting known about the organization of school work. Studneets gain first experience with teaching the subject of physics.	
<b>Brief outline of the course:</b> Students observe the process of teaching physics at lower and upper secondary schools and analyze it with teacher trainer. Practice takes place continuously durin the course of the semester. Practice is scheduled once a week at the time of the first to third lesson at schools. The first two lessons are obeservation/teaching, the third lesson - analysing the teaching process under the guidance of the teacher trainer.	
<b>Recommended literature:</b>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 67	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Jozef Hanč, PhD.	
<b>Date of last modification:</b> 03.05.2015	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ FEP1/15	<b>Course name:</b> School Computer-Based Physical Laboratory
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> The final assessment is based on the sum of partial results Test 30 points active participation 10 points project (development of mathematical model, videomeasurement and physical experiment) 60 points	
<b>Learning outcomes:</b> After the course student gains an overview about the possible use of digital technologies to support active learning in physics. He gains skills to use and develop activities on measuring data with the help of datalogging, measuring on videorecordings and picture and modeling physical processes. Student is able to implement such activities in physics teaching to support active learning and conceptual understanding.	
<b>Brief outline of the course:</b> The aim of the course is to present the use of digital technologies to enhance active learning in science with the help of datalogging, videomeasurement, measurement from the picture and modeling tools. Mathematical modeling is based on dynamical modeling of physical phenomena. Within the course students carry out computer-based experiments, videomeasurements and measurement on the picture and create corresponding models. The activities involve selected topics of secondary school physics. The emphasize is put on the methods of implementation of the activities with regard to active students' learning.	
<b>Recommended literature:</b> [1]Koubek, V., Pecen, I.: Fyzikálne experimenty a modely v školskom mikropočítačom podporovanom laboratóriu, Univerzita Komenského, Bratislava, 1999 [2]Príručka COACH [3] <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 10					
A	B	C	D	E	FX
70.0	30.0	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Zuzana Ješková, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/ PSP1a/05		<b>Course name:</b> School Physical Experiments I			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 1.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> continuous written tests being active in practises final oral examination					
<b>Learning outcomes:</b> To gain basic skills with demonstration and physics interpretation of school physics experiments belonging to the subject matter in Physics classes at basic schools and high schools. To become familiar with didactic procedures related to using school experiments in different phases of the educational process.					
<b>Brief outline of the course:</b> The practices are aimed at practical realization and physics interpretation of school demonstration experiments from selected topics of the physics subject matter for basic-school and high-school pupils. The emphasis is on familiarizing with teaching aids and didactic devices used in performing school physics experiments and on getting basic skills with their utilization in physics teaching.					
<b>Recommended literature:</b> 1.Kašpar,E.,Vachek,J.: Pokusy z fyziky na středních školách, I.díl, SPN Praha,1967 2.Koubek, V. a kol.: Školské pokusy z fyziky, SPN Bratislava, 1992 3. <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 75					
A	B	C	D	E	FX
49.33	20.0	17.33	6.67	4.0	2.67
<b>Provides:</b> doc. RNDr. Marián Kireš, PhD.					
<b>Date of last modification:</b> 03.05.2015					

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/ PSP1b/04		<b>Course name:</b> School Physical Experiments II			
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> continuous written tests being active in practises final oral examination					
<b>Learning outcomes:</b> Students should gain knowledge and broaden skills necessary for understanding methods, techniques and physical interpretations of all types of school physical experiments that are parts of the subject matter in physics classes at basic and high schools.					
<b>Brief outline of the course:</b> The practises are aimed at practical realization and physics interpretation of school demonstration experiments from selected topics of the physics subject matter for basic- and high-school pupils and their convenient incorporation into educational process. The emphasis is on familiarizing with teaching aids and didactic devices used in performing school physics experiments and on extending skills with their utilization in physics teaching.					
<b>Recommended literature:</b> 1. Onderová, L., Kireš, M., Ješková, Z., Degro, J.: Praktikum školských pokusov z fyziky II., PF UPJŠ 2. Kašpar, E., Vachek, J.: Pokusy z fyziky na středních školách, I. díl, SPN Praha, 1967 3. Žouželka, J., Fuka, J.: Pokusy z fyziky na středních školách, II. díl, SPN Praha, 1971 4. <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 70					
A	B	C	D	E	FX
52.86	11.43	28.57	4.29	1.43	1.43



<b>Provides:</b> doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančinová, Ph.D.
<b>Date of last modification:</b> 02.04.2020
<b>Approved:</b>

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ VPSP/04	<b>Course name:</b> School Physics Experiments III
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> continuous written tests active work in practises final oral examination	
<b>Learning outcomes:</b> The students gain skills and competencies to the own and effective organisation and solving of experimental tasks, use of activities enhanced by digital technologies for physics teaching at lower and upper secondary level.	
<b>Brief outline of the course:</b> The practices are aimed at practical realization and physics interpretation of different forms of selected school demonstration. The emphasis is on creative utilization of teaching aids and didactic devices and computer-aided experiments.	
<b>Recommended literature:</b> Šucha, J.: Metodická príručka pre rozkladný transformátor, Učebné pomôcky B.Bystrica, 1973 Demkanin, P. a kol. Počítačom podporované prírodovedné laboratórium, FMFI UK Bratislava, 2006, ISBN:80-89186-10-6 Ješková, Z., a kol. Využitie informačných a komunikačných technológií v predmete Fyzika pre stredné školy : učebný materiál - modul 3. - 1. vyd. - Košice : Elfa, 2010. - 242 s., ISBN 978-80-8086-146-9 Duľa, I. a kol. Využitie informačných a komunikačných technológií v predmete Fyzika pre základné školy : učebný materiál - modul 3. - 1. vyd. - Košice : Elfa, 2010. - 240 s., ISBN 978-80-8086-154-4 Ješková, Z., Degro, J., Onderová, L.: Počítačom podporovaná výučba fyziky, PF UPJŠ, Košice, ISBN 80 - 7097 - 451 -6 <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 2					
A	B	C	D	E	FX
0.0	100.0	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., RNDr. Ľudmila Onderová, PhD.					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚTVŠ/ ÚTVŠ/CM/13	<b>Course name:</b> Seaside Aerobic Exercise
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> combined, present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for course completion: Attendance	
<b>Learning outcomes:</b> Learning outcomes: Students will be provided an overview of possibilities how to spend leisure time in seaside conditions actively and their skills in work and communication with clients will be improved. Students will acquire practical experience in organising the cultural and art-oriented events, with the aim to improve the stay and to create positive experiences for visitors.	
<b>Brief outline of the course:</b> Brief outline of the course: 1. Basics of seaside aerobics 2. Morning exercises 3. Pilates and its application in seaside conditions 4. Exercises for the spine 5. Yoga basics 6. Sport as a part of leisure time 7. Application of projects of productive spending of leisure time for different age and social groups (children, young people, elderly) 8. Application of seaside cultural and art-oriented activities in leisure time	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 41	
abs	n
12.2	87.8

<b>Provides:</b> Mgr. Agata Horbacz, PhD.
<b>Date of last modification:</b> 15.03.2019
<b>Approved:</b>

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/DEX/15		<b>Course name:</b> Selected Demonstration Experiments			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 1 <b>Per study period:</b> 28 / 14 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 3					
<b>Recommended semester/trimester of the course:</b> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> Seminar work – a project dealing with hands-on experiments and their role in Physics teaching. Oral examination					
<b>Learning outcomes:</b> The goal of the course is to develop pedagogic skills and creativity of future Physics teachers through non-traditional physical experiments.					
<b>Brief outline of the course:</b> The aim of the lecture is to show a lot of non-traditional physical experiments which can help students understand physical phenomena and find their connection with everyday life. The experiments are mainly hands-on ones which can be performed with simple tools and don't require any special equipment. The experiments are carried out by students themselves. Through these experiments students are able to gain practical skills, develop experimental habits and verify their theoretical knowledge.					
<b>Recommended literature:</b> 1. Onderová L.: Netradičné experimenty vo vyučovaní fyziky, MC Prešov, 2002 2. Lorbeer, G.L., Nelsonová, L.W.: Fyzikální pokusy pro děti, Portál, Praha, 1998 3. Kostič, Ž.: Medzi hrou a fyzikou, Alfa, Bratislava, 1971 4. Kireš, M., Onderová, L.: Fyzika každodenného života v experimentoch a úlohách, JSMF Bratislava 2001, ISBN 80-7097-446-X 5. <a href="http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm</a>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 7					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

<b>Provides:</b> doc. RNDr. Marián Kireš, PhD.
<b>Date of last modification:</b> 28.03.2020
<b>Approved:</b>

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ VPF1/15	<b>Course name:</b> Selected General Physics Problems I
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> 1. writing exam 20 points 2. writing exam 20 points self examples 60 bodov A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
<b>Learning outcomes:</b> Physics interpretation of everyday phenomena can help with deeper understanding of physics problems.	
<b>Brief outline of the course:</b> 1. Kinematics and dynamics 2. Hydrostatics and hydrodynamics 3. Surface properties of liquids 4. Thermics and Thermodynamics 5. Thermics and Thermodynamics II 6. Electrostatics 7. Electric field 8. Magnetic field 9. Mechanical oscillations, resonance, waves 10. Acoustics 11. Ray Optics 12. Wave Optics 13. Student assignments presentation	
<b>Recommended literature:</b> 1. Nahodil, J.: Fyzika v bežnom živote, Prometheus, Praha, 1996 2. Tulčinský, J.: Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990 3. Kašpar, E.: Problémové vyučovanie a problémové úlohy, SPN, Praha 1982 4. Feynman, R.P.: Feynmanove prednášky z fyziky 1-5, Alfa, 1985 5. Landau, Kitajgorodskij: Fyzika pre každého, Alfa 1972 6. Lange, V.: To chce vtip!, Alfa, Bratislava, 1988 7. <a href="http://kekule.science.upjs.sk/fyzika">http://kekule.science.upjs.sk/fyzika</a>	



8. <a href="http://physedu.science.upjs.sk">http://physedu.science.upjs.sk</a>					
<b>Course language:</b> Slovak, English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 14					
A	B	C	D	E	FX
85.71	14.29	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Marián Kireš, PhD.					
<b>Date of last modification:</b> 28.03.2020					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ VPF2/15	<b>Course name:</b> Selected General Physics Problems II
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> presentation of selected problem 30 p writing exam 70 p A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0	
<b>Learning outcomes:</b> Everyday phenomena are used for deeper and conceptual understanding of physics problem.	
<b>Brief outline of the course:</b> 1.Mechanics •Coriolisova force •How Swing works •Bicycle •Tides •Inertia 2.Hydromechanics •Archimedes screw •Water flow •Archimedes principle in Action 3.Kapilarity •Water in plant •Kapilár hysteresis •Bubbles and soap •Floating on water surface 4.Acoustic •Signal production •Human voice •Space acoustic •Home ciname 5.Optics •Sight •Opticalillusions	

- Space imaging
  - Atmospheric acoustic
- 6.Probléms IYPT
- Magnetohydrodynamics
  - Bulbs
  - Falling spring
  - Ship movement
  - Thermal exchange
- 7.Differenct problems
- Sonoluminiscence
  - Ice pick
  - Kelvin water droplet
  - Water stain
- 8.Student work presentation

**Recommended literature:**

1. Walker, J.: The Flying Circus of Physics with answers, John Wiley & Sons, 2005
  2. Gnädig, P., Honyek, G., Riley, K.: 200 Puzzling Physics Problems with Hints and Solutions, Cambridge University Press, 2001
  3. Stepan, J.: Targeting Studnets ` Misconceptions, Showboard, 2003
  4. Swartz, C.: Back of the Envelope Physics, The John Hopkins Uni. Press, Baltimore, 2003
  5. Nahodil, J.: Fyzika v bežnom živote, Prometheus, Praha, 1996
  6. Tulčinský, J.: Zbierka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990
  7. Kašpar, E. : Problémové vyučovanie a problémové úlohy, SPN, Praha 1982
  8. Feynman, R.P. : Feynmanove prednášky z fyziky 1-5, Alfa, 1985
  9. Landau, Kitajgorodskij : Fyzika pre každého, Alfa 1972
  10. Lange, V.: To chce vtip!, Alfa, Bratislava, 1988
- actual articles

**Course language:**

Slovak, English

**Notes:**

**Course assessment**

Total number of assessed students: 9

A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0

**Provides:** doc. RNDr. Marián Kireš, PhD.

**Date of last modification:** 03.05.2015

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/DSU1a/15	<b>Course name:</b> Seminar to diploma theses in informatics XI
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚINF/PDSI1/15	
<b>Conditions for course completion:</b> 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.	
<b>Learning outcomes:</b> 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.	
<b>Brief outline of the course:</b> 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 JANOVSÁ 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: 7

abs	n
100.0	0.0

**Provides:** doc. RNDr. Ľubomír Šnajder, PhD.

**Date of last modification:** 01.08.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚINF/DSU1b/15	<b>Course name:</b> Seminar to diploma theses in informatics XI
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> ÚINF/DSU1a/15	
<b>Conditions for course completion:</b> Conditions for ongoing evaluation: 1. Creation of diagnostic tools for teaching selected topics. 2. Creation of teaching aids for teaching selected topics. 3. Creating preparation for teaching selected topics. 4. Evaluation of pilot teaching. 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.	
<b>Learning outcomes:</b> 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.	
<b>Brief outline of the course:</b> 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.					
<p><b>Recommended literature:</b></p> <p>MEŠKO, Dušan, Dušan KATUŠČÁK and Ján FINDRA, 2013. Akademická príručka: Chcete byť úspešní na vysokej škole? 3. vydanie. Osveta, 495 pp. ISBN 9788080633929.</p> <p>KATUŠČÁK, Dušan, 2013. Ako písať záverečné a kvalifikačné práce. Enigma, 162 pp. ISBN 8089132454.</p> <p>COMPUTER SCIENCE TEACHERS ASSOCIATION. Home Page Computer Science Teachers Association [online]. [cited 2021-7-30]. Available from: <a href="https://www.csteachers.org/">https://www.csteachers.org/</a></p> <p>ASSOCIATION FOR COMPUTING MACHINERY. The ACM Digital Library [online]. [cited 2021-7-30]. Available from: <a href="https://dl.acm.org/">https://dl.acm.org/</a></p> <p>SPRINGER NATURE SWITZERLAND AG. Home - Springer [online]. [cited 2021-7-30]. Available from: <a href="https://link.springer.com/">https://link.springer.com/</a></p> <p>BAČÍKOVÁ, Mária, Anna JANOVSÁ 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: <a href="https://unibook.upjs.sk/sk/filozoficka-fakulta/1266-zaklady-metodologie-pedagogicko-psychologickeho-vyskumu-sprievodca-pre-studentov-ucitelstva">https://unibook.upjs.sk/sk/filozoficka-fakulta/1266-zaklady-metodologie-pedagogicko-psychologickeho-vyskumu-sprievodca-pre-studentov-ucitelstva</a></p> <p>Informatics in Education. Vilnius University Institute of Data Science and Digital Technologies. ISSN 2335-8971 (online). Also available from: <a href="https://infedu.vu.lt/journal/INFEDU">https://infedu.vu.lt/journal/INFEDU</a></p> <p>Matematika–fyzika–informatika. Praha: PROMETHEUS. ISSN 1805-7705. Also available from: <a href="http://www.mfi.upol.cz/index.php/mfi/index">http://www.mfi.upol.cz/index.php/mfi/index</a></p> <p>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: <a href="http://www.didinfo.net/minule-rocniky">http://www.didinfo.net/minule-rocniky</a></p> <p>CENTRUM VEDECKO-TECHNICKÝCH INFORMÁCIÍ SR. Centrálny register záverečných a kvalifikačných prác [online]. [cited 2021-7-30]. Available from: <a href="https://cms.crzp.sk/">https://cms.crzp.sk/</a></p>					
<p><b>Course language:</b></p> <p>Slovak and partly English due to selected information sources</p>					
<p><b>Notes:</b></p> <p>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.</p>					
<p><b>Course assessment</b></p> <p>Total number of assessed students: 30</p> <table border="1"> <thead> <tr> <th>abs</th><th>n</th></tr> </thead> <tbody> <tr> <td>100.0</td><td>0.0</td></tr> </tbody> </table>		abs	n	100.0	0.0
abs	n				
100.0	0.0				
<p><b>Provides:</b> doc. RNDr. Ľubomír Šnajder, PhD.</p>					
<p><b>Date of last modification:</b> 01.08.2021</p>					
<p><b>Approved:</b></p>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KSSFaK/VSJU/15	<b>Course name:</b> Slovak Language for Teachers
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1., 3.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> passing a final test (min. 55 %)	
<b>Learning outcomes:</b> Mastering of standard Slovak in spoken and written discourse. Becoming familiarized with codification manuals, acquiring skills related to bibliography and quotation standards. Mastering of written communication in accordance with current orthographical rules. Mastering of basic characteristics of expressions of text and style and fundamentals of text composition.	
<b>Brief outline of the course:</b> Characteristics of basic terms of general linguistics (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.	
<b>Recommended literature:</b> Krátky slovník slovenského jazyka. Bratislava: Veda 1997. Slovník súčasného slovenského jazyka. Bratislava: Veda 2006. Slovník súčasného slovenského jazyka. Bratislava: Veda 2011. Slovník súčasného slovenského jazyka. Bratislava: Veda 2015. Pravidlá slovenského pravopisu. Bratislava: Veda 2000 (2013). BÓNOVÁ, I. - JASINSKÁ, L.: Jazyková kultúra nielen pre lingvistov. Košice: UPJŠ 2019. 100 s. KRÁL, Á.: Pravidlá slovenskej výslovnosti. Martin: Matica slovenská 2005. 423 s. ONDRUŠ, Š. – SABOL, J.: Úvod do štúdia jazykov. 3. vyd. Bratislava, SPN 1987. 343s. SABOL, J.- SLANČOVÁ, D. - SOKOLOVÁ, M.: Kultúra hovoreného slova. Prešov, FF UPJŠ 1989. SABOL, J. – BÓNOVÁ, I. – SOKOLOVÁ, M.: Kultúra hovoreného prejavu. Prešov: FF PU 2006.	



FINDRA, J.: Štylistika slovenčiny. Martin: Osveta, 2004.  
 FINDRA, Ján: Štylistika slovenčiny v cvičeniach. Martin : Osveta, 2005.  
 SLANČOVÁ, D.: Praktická štylistika. 2., upravené a doplnené vydanie. Prešov: Slovacontact  
 1996. 178 s. ISBN 80-901417-9-X.

**Course language:**

**Notes:**

**Course assessment**

Total number of assessed students: 96

A	B	C	D	E	FX
14.58	29.17	33.33	12.5	10.42	0.0

**Provides:** PhDr. Iveta Bónová, PhD., PhDr. Lucia Jasinská, PhD., Mgr. Lena Ivančová, PhD.

**Date of last modification:** 08.06.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ FKS/15	<b>Course name:</b> Solid State Physics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 3 <b>Per study period:</b> 42 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 3	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Two written tests during semester. The results of the two written tests during semester and oral examination after finishing the semester. If the results of both tests are better than level "D" then the oral examination may be omitted.	
<b>Learning outcomes:</b> A general introductory course in solid state physics and material science. Students will learn about selected theoretical models and experimental techniques in condensed matter physics. They also learn how to interpret simple experimental results.	
<b>Brief outline of the course:</b> 1. week: Structure of crystals. Amorphous materials. Space and crystal lattice, elementar cell. Bravais lattices and crystallographic systems. Directions and planes in a crystal lattice – Miller's indexes. Reciprocal lattice. 2. week: Methods of structural analysis. Diffraction of X-ray radiation on crystals. Bragg's equation and Laue's condition, relation between them. Ewald's construction for different experimental techniques. 3. week: Mechanical properties of solids and perturbations in crystal lattice. Classification of solids according to nature of bonding among elements in crystal lattice. Basic types of bondings (ion, covalent, metal, Van der Waals, hydrogen) 4. week: Thermal properties of solids – Einstein and Debye theory of specific heat. Electrical properties of solids. 5. week: Sommerfield's theory. Density of electronic states. Influence of temperature on the distribution of free electrons. Fermi – Dirac distribution function. 6. week: Electron in periodic potential. Energy spectrum of electrons in crystal. Kronig – Penney's model. Effective mass of electron. 7. week: Concept of holes. Semiconductors. Electrical conductivity of metals and semiconductors adopting properties of energy spectrum of electrons. 8. week: Transport properties in metals and semiconductors – Hall effect, magnetoresistance, photoconductivity, contact phenomena, quantum Hall effect. 9. week: Macroscopic quantum phenomena: Superconductivity and Superfluidity.	

10. week: Magnetic properties of solids – orbital and spin magnetic moment of atom. Definition of basic magnetic quantities (magnetization, polarization, susceptibility, permeability). Vector model of atom. 11. Classification of magnetic materials according to nature of magnetic interactions. Diamagnetic and paramagnetic systems. 12 week: Basic properties of ferromagnets. Magnetic hysteresis, coercitive field. Domain structure, physical reasons ledaing to the domain structure.					
<b>Recommended literature:</b> H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976.					
<b>Course language:</b> Slovak, English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 12					
A	B	C	D	E	FX
41.67	41.67	8.33	8.33	0.0	0.0
<b>Provides:</b> Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, DrSc.					
<b>Date of last modification:</b> 06.07.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/TRS/15		<b>Course name:</b> Special Theory of Relativity			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 2					
<b>Recommended semester/trimester of the course:</b> 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> To acquaint students with principles of a special theory of relativity.					
<b>Brief outline of the course:</b> Galilean transformations and Galilean principle of relativity. Ether's hypothesis. Michelson experiment. Einstein's principles of the special theory of relativity. Lorentz transformation and its physical consequences. Interval and light cone. Proper time. Minkowski's space-time. Mathematical apparatus of special relativity. Relativistic electrodynamics. Relativistic mechanics.					
<b>Recommended literature:</b> 1. Greiner W.: Classical Mechanics-Point Particles and Relativity, Springer-Verlag, New York, 2004. 2. Goldstein H., Poole Ch., Safko J.: Classical Mechanics, Addison Wesley, San Francisco, 2002. 3. Landau L.D., Lifšic E.M.: The Classical Theory of Fields, Pergamon Press, Oxford, 1975.					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 42					
A	B	C	D	E	FX
33.33	40.48	9.52	9.52	7.14	0.0
<b>Provides:</b> RNDr. Tomáš Lučivjanský, PhD.					
<b>Date of last modification:</b> 10.07.2017					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚTVŠ/ TVa/11	<b>Course name:</b> Sports Activities I.
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> I., I.II., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Min. 80% of active participation in classes.	
<b>Learning outcomes:</b> Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.	
<b>Brief outline of the course:</b> Brief outline of the course: Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess. In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>							
Total number of assessed students: 12859							
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
87.01	0.08	0.0	0.0	0.0	0.04	8.1	4.77
<b>Provides:</b> Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.							
<b>Date of last modification:</b> 13.05.2021							
<b>Approved:</b>							

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚTVŠ/ TVb/11		<b>Course name:</b> Sports Activities II.					
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present							
<b>Number of ECTS credits:</b> 2							
<b>Recommended semester/trimester of the course:</b> 2.							
<b>Course level:</b> I., I.II., II.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> active participation in classes - min. 80%.							
<b>Learning outcomes:</b> Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.							
<b>Brief outline of the course:</b> Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess. In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.							
<b>Recommended literature:</b>							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 11675							
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
84.52	0.56	0.02	0.0	0.0	0.05	10.63	4.22

<b>Provides:</b> Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.
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<b>Date of last modification:</b> 13.05.2021
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<b>Approved:</b>
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## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚTVŠ/ TVc/11		<b>Course name:</b> Sports Activities III.					
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present							
<b>Number of ECTS credits:</b> 2							
<b>Recommended semester/trimester of the course:</b> 3.							
<b>Course level:</b> I., I.II., II.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> min. 80% of active participation in classes							
<b>Learning outcomes:</b> Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.							
<b>Brief outline of the course:</b> Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess. In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.							
<b>Recommended literature:</b>							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 7873							
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
88.8	0.05	0.01	0.0	0.0	0.03	4.08	7.04

**Provides:** Mgr. Marcel Čurgali, Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.

**Date of last modification:** 13.05.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice							
<b>Faculty:</b> Faculty of Science							
<b>Course ID:</b> ÚTVŠ/ TVd/11		<b>Course name:</b> Sports Activities IV.					
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> combined, present							
<b>Number of ECTS credits:</b> 2							
<b>Recommended semester/trimester of the course:</b> 4.							
<b>Course level:</b> I., I.II., II.							
<b>Prerequisites:</b>							
<b>Conditions for course completion:</b> min. 80% of active participation in classes							
<b>Learning outcomes:</b> Sports activities in all their forms prepare university students for their professional and personal life. They have a great impact on physical fitness and performance. Specialization in sports activities enables students to strengthen their relationship towards the selected sport in which they also improve.							
<b>Brief outline of the course:</b> Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, aikido, basketball, badminton, body form, bouldering, floorball, yoga, power yoga, pilates, swimming, body-building, indoor football, S-M systems, step aerobics, table tennis, tennis, volleyball and chess. In the first two semesters of the first level of education students will master basic characteristics and particularities of individual sports, motor skills, game activities, they will improve level of their physical condition, coordination abilities, physical performance, and motor performance fitness. Last but not least, the important role of sports activities is to eliminate swimming illiteracy and by means of a special program of medical physical education to influence and mitigate unfitness. In addition to these sports, the Institute offers for those who are interested winter and summer physical education trainings with an attractive program and organises various competitions, either at the premises of the faculty or University or competitions with national or international participation.							
<b>Recommended literature:</b>							
<b>Course language:</b>							
<b>Notes:</b>							
<b>Course assessment</b> Total number of assessed students: 5125							
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs
83.14	0.31	0.04	0.0	0.0	0.0	7.75	8.76

**Provides:** Mgr. Marcel Čurgali, Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, PhD., Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., prof. RNDr. Stanislav Vokál, DrSc., Mgr. Patrik Berta, Mgr. Ladislav Kručanica, PhD., Bc. Richard Melichar, Mgr. Petra Tomková, PhD.

**Date of last modification:** 13.05.2021

**Approved:**

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚFV/ SVKD/04		<b>Course name:</b> Student Scientific Conference			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 4					
<b>Recommended semester/trimester of the course:</b>					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> presentation of results of studnets' research work at Students' scientific conference					
<b>Learning outcomes:</b> Student gains experience and skills in processing and presentation of results of his research work.					
<b>Brief outline of the course:</b> Presentation of results of studnets' research work at Students' scientific conference.					
<b>Recommended literature:</b> Based on the recommendations of supervisor					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 45					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> ÚINF/ SVK1/15		<b>Course name:</b> Student scientific conference			
<b>Course type, scope and the method:</b> <b>Course type:</b> <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 4					
<b>Recommended semester/trimester of the course:</b> 2., 4.					
<b>Course level:</b> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 182					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b>					
<b>Date of last modification:</b> 03.05.2015					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚFV/ SJF1/15	<b>Course name:</b> Subnuclear Physics
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> written test and thesis exam	
<b>Learning outcomes:</b> Preview of basic characteristics and classification of elementary particles, their structures, theoretical description and experimental technique.	
<b>Brief outline of the course:</b> 1.-3. Historical review of particle physics. Fundamental interactions and force carriers. Particles – properties, basics concepts. Conservation rules and symmetries. Feynman Diagrams. 4.-5. Observations of elementary particles. 6.-8. Classification of particles. Particle production. 9.-10. Quarks and gluons. Internal structure of hadrons. Eightfold way. Quantum chromodynamics. 11.-12. Unification of weak and electromagnetic interaction. Standard model - basic concepts, Higgs boson. Subnuclear physics and experimental methods.	
<b>Recommended literature:</b> 1. Close F.: The Cosmic Onion - Quarks and the Nature of the Universe, Oxford, 1990. 2. Hajko V. and team of authors, Physics in experiments, Bratislava, 1997. 3. Kapitonov I.M., Vvedenije v fiziku jadra i chastic (Russian), Moscow, 2004. 4. Brandt S., The harvest of a century, Discoveries of modern physics in 100 episodes, Oxford, 2009. 5. Yang F., J.H.Hamilton, Modern Atomic and Nuclear Physics, World Scientific Publ., 2010. 6. Tipler P.A., Modern Physics, W.H. Freeman and Co., 2012	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 37					
A	B	C	D	E	FX
37.84	5.41	5.41	21.62	21.62	8.11
<b>Provides:</b> prof. RNDr. Stanislav Vokál, DrSc., doc. RNDr. Janka Vrláková, PhD.					
<b>Date of last modification:</b> 09.08.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚTVŠ/ LKSp/13	<b>Course name:</b> Summer Course-Rafting of TISA River
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for course completion: Attendance Final assessment: Raft control on the waterway (attended/not attended)	
<b>Learning outcomes:</b> Learning outcomes: Students have knowledge of rafts (canoe) and their control on waterway.	
<b>Brief outline of the course:</b> Brief outline of the course: 1. Assessment of difficulty of waterways 2. Safety rules for rafting 3. Setting up a crew 4. Practical skills training using an empty canoe 5. Canoe lifting and carrying 6. Putting the canoe in the water without a shore contact 7. Getting in the canoe 8. Exiting the canoe 9. Taking the canoe out of the water 10. Steering a) The pry stroke (on fast waterways) b) The draw stroke 11. Capsizing 12. Commands	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>	
Total number of assessed students: 153	
abs	n
45.75	54.25
<b>Provides:</b> Mgr. Dávid Kaško, PhD.	
<b>Date of last modification:</b> 18.03.2019	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPE/MPPa/15	<b>Course name:</b> Supervised Teaching Practice
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b>	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 503	
abs	n
100.0	0.0
<b>Provides:</b> doc. PhDr. Beata Gajdošová, PhD., doc. PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petříková, PhD., Mgr. Lenka Kohoutková	
<b>Date of last modification:</b> 08.06.2021	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> ÚTVŠ/ KP/12	<b>Course name:</b> Survival Course
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week: Per study period:</b> 36s <b>Course method:</b> combined, present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b>	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Conditions for course completion: Attendance Final assessment: continuous fulfilment of all tasks within the course	
<b>Learning outcomes:</b> Learning outcomes: Students will be familiarized with principles of safe stay and movement in extreme natural conditions as they will obtain theoretical knowledge and practical skills to solve the extraordinary and demanding situations connected with survival and minimization of damage to health. The course develops team work and students will learn how to manage and face the situations that require overcoming of obstacles.	
<b>Brief outline of the course:</b> Brief outline of the course: Lectures: 1. Principles of behaviour and safety for movement and stay in unknown mountains 2. Preparation and leadership of tour 3. Objective and subjective danger in mountains 4. Principles of hygiene and prevention of damage to health in extreme conditions Exercises: 1. Movement in terrain, orientation and navigation in terrain (compasses, GPS) 2. Preparation of improvised overnight stay 3. Water treatment and food preparation.	
<b>Recommended literature:</b>	
<b>Course language:</b>	
<b>Notes:</b>	

<b>Course assessment</b>	
Total number of assessed students: 393	
abs	n
44.53	55.47
<b>Provides:</b> MUDr. Peter Dombrovský, Mgr. Ladislav Kručanica, PhD.	
<b>Date of last modification:</b> 15.03.2019	
<b>Approved:</b>	

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice					
<b>Faculty:</b> Faculty of Science					
<b>Course ID:</b> KPE/ PDU/15		<b>Course name:</b> Teaching Methodology and Pedagogy			
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 5					
<b>Recommended semester/trimester of the course:</b> 1.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 550					
A	B	C	D	E	FX
27.27	28.55	25.64	13.27	4.55	0.73
<b>Provides:</b> doc. PaedDr. Renáta Orosová, PhD., PaedDr. Michal Novocký, PhD.					
<b>Date of last modification:</b> 14.06.2021					
<b>Approved:</b>					

## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/UPR/15	<b>Course name:</b> The Art of Aiding by Verbal Exchange
<b>Course type, scope and the method:</b> <b>Course type:</b> Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 <b>Per study period:</b> 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 2	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> 1. Active participation in seminars 2. Elaboration and presentation of PPT presentation on the assigned topic. Maximum number of points 20; minimum number of points 11. 3. Final test in the range of 20 questions from selected chapters and lectures. Maximum number of points 20; minimum number of points 11. The final evaluation (mark) is the sum of points for the presentation and the test. A 40b - 37b B 36b - 33b C 32b - 29b D 28b - 25b E 24b - 21b FX 20b - 0b The evaluation of the course and its subsequent completion will be based on clearly and objectively set requirements, which will be set in advance and will not change. The aim of the assessment is to ensure an objective and fair mapping of the student's knowledge while adhering to all ethical and moral standards. There is no tolerance for students' fraudulent behavior, whether in the teaching process or in the assessment process.	
<b>Learning outcomes:</b> Provide students with basic information about a systemic approach to helping. Train interviewing, clarify orders. Reflect on help options. The student is able to demonstrate an understanding of the theoretical principles of conducting a helping conversation. The student is able to describe, explain and evaluate in what context to use which of the selected techniques to help the interview with the individual. The student is able to use basic selected techniques when working with an individual in the interview process. The method of teaching the subject will be oriented to the student. Lecturers will be interested in students' needs, expectations and opinions so as to encourage them to think critically by expressing respect and feedback on their opinions and needs. The content of the curriculum will be based on primary and high-quality sources that will reflect the topicality of the topics so as to ensure the connection of the curriculum with other subjects and also the connection of the curriculum with practice. Students will be expected to take an active approach in lectures and seminars with an emphasis on their independence and responsibility.	
<b>Brief outline of the course:</b>	

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 an individual. Model situations of conducting an interview with a group. Professional possibilities, advantages and pitfalls of solving problems with an individual, with a group.					
<b>Recommended literature:</b>					
<b>Course language:</b>					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 117					
A	B	C	D	E	FX
87.18	3.42	7.69	0.85	0.85	0.0
<b>Provides:</b> Mgr. Ondrej Kalina, PhD.					
<b>Date of last modification:</b> 24.06.2021					
<b>Approved:</b>					



## COURSE INFORMATION LETTER

<b>University:</b> P. J. Šafárik University in Košice	
<b>Faculty:</b> Faculty of Science	
<b>Course ID:</b> KPPaPZ/ZMPPV/15	<b>Course name:</b> The Fundamentals of Pedagogico-Psychological Research Methodology
<b>Course type, scope and the method:</b> <b>Course type:</b> Lecture / Practice <b>Recommended course-load (hours):</b> <b>Per week:</b> 2 / 2 <b>Per study period:</b> 28 / 28 <b>Course method:</b> present	
<b>Number of ECTS credits:</b> 4	
<b>Recommended semester/trimester of the course:</b> 2.	
<b>Course level:</b> II.	
<b>Prerequisites:</b> KPPaPZ/PPgU/15,KPE/PDU/15	
<b>Conditions for course completion:</b> - active participation in seminars, presentation of assignments in groups, final exam	
<b>Learning outcomes:</b> 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.	
<b>Brief outline of the course:</b> 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.	
<b>Recommended literature:</b> Bačíková, M., Janovská, A., Orosová, O. Základy metodológie pedagogicko-psychologického výskumu. 2.doplnené vydanie. Šafárik Press, 2019. dostupné online: <a href="https://unibook.upjs.sk/img/cms/2019/FF/zaklady-metodologie-ped-psych-vyskumu-2-vyd-web.pdf">https://unibook.upjs.sk/img/cms/2019/FF/zaklady-metodologie-ped-psych-vyskumu-2-vyd-web.pdf</a> 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. <a href="http://www.e-metodologia.fedu.uniba.sk/">http://www.e-metodologia.fedu.uniba.sk/</a>	
<b>Course language:</b>	

<b>Notes:</b>					
<b>Course assessment</b>					
Total number of assessed students: 526					
A	B	C	D	E	FX
18.63	27.38	23.57	19.58	10.65	0.19
<b>Provides:</b> Mgr. Mária Bačíková, PhD., PhDr. Anna Janovská, PhD.					
<b>Date of last modification:</b> 24.06.2021					
<b>Approved:</b>					