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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> ÚMV/ ATA/14		<b>Course name:</b> Algebra and theoretical arithmetic			
<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> 4					
<b>Recommended semester/trimester of the course:</b> 3.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> It is based on the results of written and oral exam.					
<b>Learning outcomes:</b> Obtain knowledge about sets $N$ , $Z$ , $Q$ and $R$ , about their axiomatic building-up, the operations and the orderings on them.					
<b>Brief outline of the course:</b> Sets of numbers $N$ , $Z$ , $Q$ and $R$ , their axiomatic building, operations and ordering.					
<b>Recommended literature:</b> J. Blažek a kol.: Algebra a teoretická aritmetika I. díl. SPN, Praha 1983 K. Hruša: Elementární aritmetika. Přírodovědecké vydavatelství, Praha 1953 W. Sierpinski: Arytmetyka teoretyczna. PWN, Varšava 1966 T. Šalát a kol.: Algebra a teoretická aritmetika (2). Alfa, Bratislava - SNTL Praha 1986					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 54					
A	B	C	D	E	FX
55.56	24.07	12.96	7.41	0.0	0.0
<b>Provides:</b> doc. RNDr. Matúš Harminc, CSc.					
<b>Date of last modification:</b> 06.03.2018					
<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> ÚMV/ AIM/10	<b>Course name:</b> Application of ICT into mathematics teaching
<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> ÚMV/DDMa/14	
<b>Conditions for course completion:</b> two tests elaborated on the computer, solving problems from worksheets final project	
<b>Learning outcomes:</b> To learn students standard work procedures with the basic types of mathematical software systems and to provide examples and ideas on the possibility of using these software systems in mathematics teaching. To develop the knowledge and skills of students to use investigation and modelling in the digital environment for mathematical problems solving. Develop creative and evaluation abilities of students allow to prepare mathematics lessons with effective and meaningful use of modern technologies.	
<b>Brief outline of the course:</b> Possibilities of using numerical and graphical tools of spreadsheet to solve mathematical problems. Use of dynamic geometry systems in solving geometry problems, examples of their use in the implementation of constructivist approaches to mathematics teaching. Mathematical modelling and solving of problems in a CAS environment. The use of modern IT for active acquisition of knowledge in mathematics teaching.	
<b>Recommended literature:</b> M. Černochová et al.: Využití počítače při vyučování, Portál, 1998. S. Lukáč: Multimédiá a počítačom podporované učenie sa v matematike, PF UPJŠ Košice 2001. J. Vaníček: Počítačové kognitivní technologie ve výuce geometrie. Univerzita Karlova v Praze, 2009. Journals MFI, MIF a Obzory matematiky, fyziky a informatiky.	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 154					
A	B	C	D	E	FX
41.56	30.52	12.99	9.74	5.19	0.0
<b>Provides:</b> doc. RNDr. Stanislav Lukáč, 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/ 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> 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. Miształ M.: Thematic Vocabulary. SPN, 1998. Fictumová 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> 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> ÚMV/ VSPc/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> ÚMV/VPPb/15	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b> Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 62	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Dušan Šveda, CSc., doc. RNDr. Ingrid Semanišinová, 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> ÚMV/ VSPd/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> ÚMV/VSPc/15	
<b>Conditions for course completion:</b>	
<b>Learning outcomes:</b> Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 52	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Dušan Šveda, CSc., doc. RNDr. Ingrid Semanišinová, 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> 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> 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> ÚMV/ DDMa/14	<b>Course name:</b> Didactics of mathematics
<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.	
<b>Course level:</b> II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Continuous assessment - 60% of the total assessment, exam - 40% of the total assessment.	
<b>Learning outcomes:</b> Master the basic principles and methods of teaching of mathematics at primary and secondary schools. Gain knowledge of the various ways of teaching specific topics of school mathematics.	
<b>Brief outline of the course:</b> Subject of Didactics of Mathematics, the development of mathematics and mathematics education. Aims and objectives of mathematics teaching Planning in mathematics teaching Logical and didactical curriculum analysis Determination of learning objectives Didactical principles, methods of mathematics teaching Assessment of learning outcomes, the creation of didactic tests Mathematical problems Construction numeric fields, Theory of elementary functions, synthetic and analytic geometry	
<b>Recommended literature:</b> [1] M.Hejný a kol.: Teorie vyučovania matematiky, SPN Blava 1989, (in slovak) [2] L.Frantíková,K.Hončarivová,O.Kopanev: Didaktika matematiky, UPJŠ 1982 (in slovak) [3] R.Fischer,G.Malle: Človek a matematika, SPN Bratislava 1992 (in slovak) [4] Polya, G.: How to solve it, Princeton University Press, 1957. [5] Hejný, M., Kuřina, F.: Dítě, škola a matematika: Konstruktivistické přístupy k vyučování. Portál, Praha 2001. (in czech)	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 76					
A	B	C	D	E	FX
44.74	31.58	15.79	5.26	2.63	0.0
<b>Provides:</b> doc. RNDr. Dušan Šveda, CSc.					
<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> ÚMV/DDMb/14	<b>Course name:</b> Didactics of mathematics
<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> ÚMV/DDMa/14	
<b>Conditions for course completion:</b> Seminar paper - 40% of the total score. Written exam - 40% of the total score. Homework - 20% of the total score. Evaluation A - at least 90% points, evaluation B - at least 80%, evaluation C at least 70%, evaluationD at least 60%, evaluationE rating of at least 50% of the points. Credits shall not be granted to a student who receives less than 50% of the points.	
<b>Learning outcomes:</b> Students become familiar with some mathematical theories of education. They will acquire different teaching methods of selected topics of school mathematics. Become familiar with the potential use of history of mathematics in teaching. Students will be prepared to work in the educational process, focusing on the creative application of knowledge in mathematics.	
<b>Brief outline of the course:</b> Student learning process. Language of mathematics, enactive iconic and symbolic representation. Using history of mathematics in the teaching mathematics. Students' learning difficulties and their possible causes. Teaching mathematical proofs. Combinatorics, probability, statistics. Calculus. Developing mathematical creativity. Motivation.	
<b>Recommended literature:</b> [1] M.Hejný a kol.: Teoria vyučovania matematiky, SPN Blava 1989. [2] Hejný, M., Kuřina, F.: Dítě, škola a matematika: Konstruktivistické přístupy k vyučování. Portál, Praha 2001. [3] Fischer, R., Malle, G.: Človek a matematika, SPN Bratislava 1992. [4] Učebnice a zbierky úloh pre stredné a základné školy.	

<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 77					
A	B	C	D	E	FX
71.43	15.58	10.39	1.3	1.3	0.0
<b>Provides:</b> doc. RNDr. Ingrid Semanišínová, 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> ÚMV/ DFR/10	<b>Course name:</b> Differential equations
<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> 5	
<b>Recommended semester/trimester of the course:</b> 1.	
<b>Course level:</b> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Continuous assessment is taken the form of two tests during the semester. Final evaluation is given by continuous assessment (40%), written and oral part of the exam (30% and 30%).	
<b>Learning outcomes:</b> Theory of differential equations is one of the fundamental areas of mathematical analysis. It has numerous applications in various fields of science and technology. The main objective of this course is to familiarize students with the basics of the theory of ordinary differential equations and their systems, and methods for solving certain types of differential equations and systems. We consider them as possible mathematical models of real situations.	
<b>Brief outline of the course:</b> Basic concepts. Elementary methods for solving and applications of the first order differential equations. The existence and uniqueness of solutions to Cauchy problem for differential equations of the first order, the n-th order and for differential systems. The relationship between differential equations of the n-th order and systems. Linear differential equations of the n-th order and linear differential systems - the local and global theorem on the existence and uniqueness of solutions to Cauchy problem, basic properties of solutions, fundamental system of solutions, structure of general solution, Lagrange method of variation of constants, linear differential equations and systems with constant coefficients. Reduction of the order of differential equations. Euler differential equations. Elimination method for solving the systems of differential equations.	
<b>Recommended literature:</b> 1. L. Kluvánek, I. Mišík, M. Švec: Matematika II, SVTL, Bratislava, 1961 (in Slovak). 2. J. Eliaš, J. Horváth, J. Kajan: Zbierka úloh z vyššej matematiky 3, Alfa, Bratislava, 1980 (in Slovak). 3. S. J. Farlow: An introduction to differential equations and their applications, Dover Publications, New York, 2006. 4. W. Kohler, L. Johnson: Elementary differential equations with boundary value problems, Pearson Education, Boston, 2006. 5. M. Tenenbaum: Ordinary differential equations, Dover Publications, New York, 1985. 6. J. C. Robinson: An introduction to ordinary differential equations, Cambridge University Press, Cambridge, 2004.	

7. J. Polking, A. Boggess, D. Arnold: Differential equations, Prentice Hall (Pearson), Upper Saddle River, 2006.

**Course language:**

Slovak

**Notes:**

**Course assessment**

Total number of assessed students: 149

A	B	C	D	E	FX
20.13	20.81	14.77	22.15	18.79	3.36

**Provides:** Mgr. Jozef Kiseľák, 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> 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 consultations 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 assignments 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> 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> 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 reviewers. 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> ÚMV/ DPP2a/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> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 39	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Dušan Šveda, CSc.	
<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> ÚMV/ DPP2b/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> ÚMV/DPP2a/14	
<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> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 38	
abs	n
100.0	0.0
<b>Provides:</b> prof. RNDr. Jozef Doboš, CSc.	
<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> ÚMV/ DPP2c/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> ÚMV/DPP2b/14	
<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> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 30	
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> 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> ÚMV/ DGE/10	<b>Course name:</b> Dynamic geometry
<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> 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 using a computer, didactic project and final exam	
<b>Learning outcomes:</b> To acquire commands and the concept of dynamic constructions in the program Geogebra and Cabri 3D. To learn to use a dynamic geometry environment for experimentation with geometric objects and their attributes and the investigation of invariant properties of geometric figures and relationships between objects in triangles, quadrilaterals, and conics basic solid figures.	
<b>Brief outline of the course:</b> Constructions and exploration of the properties of triangles, quadrilaterals, circles, and their use in solving construction tasks. Menelaus' theorem, Ceva's theorem, Varignon's theorem, Ptolemy's theorem, cyclic and tangential quadrilaterals, the centre point of polygons. The use of transformations in solving tasks. Constructions of conics and their use in solving problems. Mathematical modeling and exploration of functional dependencies, solving problems for searching of extremes. The cross positions of linear geometric shapes in space, cuts of solid figures, intersection lines and solid figures. Analysis of the possibilities of using dynamic geometry environment to support active learning of mathematics.	
<b>Recommended literature:</b> 1. Vaniček, J.: Počítačové kognitivní technologie ve výuce geometrie. Univerzita Karlova v Praze, 2009. 2. King, J., Schattschneider, D.: Geometry Turned On! Dynamic Software in Learning, Teaching, and Research. The Mathematical Association of America, 1997. 3. De Villiers, M., D.: Rethinking proof with the Geometer's Sketchpad. Key Curriculum Press, 2003.	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 39					
A	B	C	D	E	FX
48.72	30.77	12.82	7.69	0.0	0.0
<b>Provides:</b> doc. RNDr. Stanislav Lukáč, 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/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:</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: 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> 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> ÚMV/ GEO2b/10		<b>Course name:</b> Geometry 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> 3 / 2 <b>Per study period:</b> 42 / 28 <b>Course method:</b> present					
<b>Number of ECTS credits:</b> 6					
<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 obtain knowledge about affine, isometric, and similarity transformations and their properties.					
<b>Brief outline of the course:</b> 1. Quadric surfaces (circular and general quadric surfaces) 2. Affine transformations (associated transformation, matrix representation, affinities, fixed points and lines, pseudo-reflections) 3. Isometric transformations (matrix representation, isometries, classification in the plane, composition of reflections) 4. Similarity transformations (matrix representation, similarities, homothety, composition of homotheties) 5. Geometry of circles (the power of a point with respect to a circle, radical axis of two circles, pencils of circles)					
<b>Recommended literature:</b> 1. M. Sekanina et al, Geometry 2, SPN, 1988 (in slovak). 2. O. Šedivý et al, Geometry 2, SPN, 1987 (in slovak). 3. H.S.M. Coxeter, Introduction to geometry, Wiley, 1989. 4. J.T. Smith, Methods of geometry, Wiley, 2000.					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 115					
A	B	C	D	E	FX
17.39	17.39	23.48	17.39	21.74	2.61
<b>Provides:</b> RNDr. Igor Fabrici, Dr. rer. nat., RNDr. Veronika Hubeňáková, 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> ÚMV/ GEO2c/10		<b>Course name:</b> Geometry III			
<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> 2.					
<b>Course level:</b> II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> A new look on the classical geometric results.					
<b>Brief outline of the course:</b> 1. Points and lines connected with a triangle ( Menelaus's theorem, Ceva's theorem, points of interest, the incircle and excircles, pedal triangles, Euler line, nine-point circle) 2. Properties of circles (the power of a point with respect to a circle, radical axis of two circles, Simson lines, Ptolemy's theorem, Morley's theorem) 3. Collinearity and concurrence (quadrangles, Varignon's parallelogram, cyclic quadrangles, Brahmagupta's formula, Napoleon triangles) 4. Focal properties of regular conics (Dandelin spheres, tangents and directrix of a regular conic) 5. Inversion with respect to a circle (basic properties, composition of inversions and homotheties)					
<b>Recommended literature:</b> 1. H.S.M. Coxeter, S.L. Greitzer, Geometry revisited, MAA, 1967. 2. R.A. Johnson, Advanced Euclidean geometry, Dover Publ., 2007. 3. A.V. Akopyan, A.A. Zaslavsky, Geometry of conics, AMS, 2007. 4. D.A. Brannan, M.F. Esplen, J.J. Gray, Geometry, Cambridge Univ. Press, 2007.					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 107					
A	B	C	D	E	FX
22.43	27.1	29.91	10.28	10.28	0.0
<b>Provides:</b> RNDr. Igor Fabrici, Dr. rer. nat.					
<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/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> 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> ÚMV/ DPU/14		<b>Course name:</b> Magister thesis and its defense			
<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>					
<b>Learning outcomes:</b>					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 30					
A	B	C	D	E	FX
76.67	10.0	3.33	6.67	3.33	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> ÚMV/ MST/19		<b>Course name:</b> Mathematical statistics			
<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> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b> To obtain at least 50% in two written tests during the semester. Total evaluation based on written tests and oral exam.					
<b>Learning outcomes:</b> Student should obtain the knowledge about basic statistical methods and the ability to apply theoretical knowledge in practical problems solving.					
<b>Brief outline of the course:</b> Random vectors, their distributions and characteristics. Joint and marginal distributions. Correlation and regression, properties of correlation coefficient. Random sample, sampling distributions and characteristics. Some important statistics and their distributions. Point estimators and their properties. Maximum likelihood method. Interval estimates, confidence interval construction. Testing of statistical hypothesis, critical region, level of significance. Methods for searching optimal critical regions. Some important parametric and nonparametric tests.					
<b>Recommended literature:</b> 1. Skřivánková V.: Pravdepodobnosť v príkladoch, UPJŠ, Košice, 2006 (in Slovak) 2. Skřivánková V.-Hančová M.: Štatistika v príkladoch, UPJŠ, Košice, 2005 (in Slovak) 3. CASELLA, G., BERGER, R., Statistical Inference, 2nd ed., Duxbury Press, 2002 4. DeGroot, M. H., Schervish, M. J.: Probability and Statistics, 4th ed., Pearson, Boston, 2012 5. Utts, J.M., Heckard, R.F.: Mind od Statistics, 5th ed., Thomson Brooks/Cole, 2014 6. Anděl J.: Základy matematické statistiky, MatfyzPress, Praha, 2011 (in Czech)					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 125					
A	B	C	D	E	FX
20.8	21.6	15.2	21.6	13.6	7.2

<b>Provides:</b> RNDr. Martina Hančová, 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> ÚMV/ MDM/14		<b>Course name:</b> Mathematics and didactics of mathematics			
<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> ÚMV/DDMa/14, ÚMV/DDMb/14					
<b>Conditions for course completion:</b> Acquiring the required number of credits in the structure defined by the study plan.					
<b>Learning outcomes:</b> Evaluation of student's competences with respect to the profile of the graduate.					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b>					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 75					
A	B	C	D	E	FX
28.0	24.0	22.67	16.0	9.33	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/ 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:</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> 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, Sbírká 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. Pecan, 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.: Sbírká 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> 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> 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 HRÍBKOVÁ, 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): Špecifika 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> 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> ÚMV/ VPPb/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>	
<b>Learning outcomes:</b> Enable students to gain first practical experience in teaching mathematics to apply theoretical knowledge in specific teaching situations, to develop their teaching skills. To acquaint students with the atmosphere and the organization of school.	
<b>Brief outline of the course:</b>	
<b>Recommended literature:</b>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	
<b>Course assessment</b> Total number of assessed students: 64	
abs	n
100.0	0.0
<b>Provides:</b> doc. RNDr. Dušan Šveda, CSc., doc. RNDr. Ingrid Semanišinová, 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://phsyedu.science.upjs.sk/sis/fyzika/experimenty/index.htm">http://phsyedu.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> ÚMV/ VMA/19	<b>Course name:</b> Selected topics on mathematical analysis
<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> I., II.	
<b>Prerequisites:</b> ÚMV/FRPb/19	
<b>Conditions for course completion:</b> Final evaluation is given by continuous assessment.	
<b>Learning outcomes:</b> Expand the knowledge of mathematical analysis needed to deepen understanding of machine learning and artificial intelligence.	
<b>Brief outline of the course:</b> <ol style="list-style-type: none"> <li>1. Vector (linear) space - examples of infinite-dimensional spaces (spaces of sequences and functions).</li> <li>2. Metric space (MS) - metric, convergence of sequences, closure and interior of a set, completeness and compactness of MP, Banach fixed-point theorem.</li> <li>3. Normed linear space (NLS) - norm, Banach spaces, relation to MS, dual spaces, Hölder, Minkowski inequality.</li> <li>4. Space with scalar product - unitary and Hilbert spaces, Cauchy-Schwartz inequality, Pythagorean theorem, parallelogram rule, relation to LNP, orthogonal projections.</li> <li>6. Operators (functionals) in NLP - linearity, continuity, boundedness, adjointness.</li> </ol>	
<b>Recommended literature:</b> <ol style="list-style-type: none"> <li>1. N. Katzourakis, E. Varvaruca, An illustrative introduction to modern analysis. Boca Raton, FL: CRC Press (2018)</li> <li>2. A. M. Bruckner, J. B. Bruckner, B. S. Thomson, Real analysis, 2nd. ed., ISBN 1434844129, 2008</li> <li>3. Taylor, A.: Úvod do funkcionální analýzy, Academia 1973.</li> <li>4. Kolmogorov, A., Fomin, S.: Základy teórie funkcí a funkcionální analýzy, 1975.</li> <li>5. S. Lang, Undergraduate Analysis, Springer, 1997.</li> </ol>	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 1					
A	B	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Ondrej Hutník, PhD., Mgr. Jozef Kiselák, PhD.					
<b>Date of last modification:</b> 27.03.2019					
<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> ÚMV/ SHM/10	<b>Course name:</b> Seminar on history of mathematics
<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> I., II.	
<b>Prerequisites:</b>	
<b>Conditions for course completion:</b> Homework, presentation on the chosen topic during the seminar. More than 91 points - evaluation of A. 81-90 points - evaluation of B. 71-80 points - rating C. 61-70 points - evaluation of D. 51-60 points - evaluation of E. Less than 50 points - FX evaluation.	
<b>Learning outcomes:</b> Students get an overview of the history of the development of certain mathematical disciplines and selected terms and about parallel between phylogenesis and ontogenesis of mathematical thinking.	
<b>Brief outline of the course:</b> Mathematics in Early Civilizations. Greek Mathematics. Mathematics in the Near and Far East (Arabia, China, India). Medieval European Mathematics. The Renaissance of Mathematics. The Beginning of Modern Mathematics.	
<b>Recommended literature:</b> Burton, D. M.: The History of Mathematics: An Introduction. McGraw–Hill, 2007. Devlin, K.: Jazyk matematiky. Dokořán, 2002 (in czech) Kolman, A.: Dejiny matematiky ve starověku. Academia, Praha, 1968 (in slovak) Juškevič, A. P.: Dejiny matematiky ve středověku. Academia, Praha 1977 (in slovak) Znáň, Š. a kol.: Pohľad do dejín matematiky. Alfa, Bratislava, 1986 (in slovak) Konforovič, A.G.: Významné matematické úlohy, SPN Praha, 1989 (in slovak)	
<b>Course language:</b> Slovak	
<b>Notes:</b>	

<b>Course assessment</b>					
Total number of assessed students: 112					
A	B	C	D	E	FX
74.11	9.82	8.93	3.57	3.57	0.0
<b>Provides:</b> doc. RNDr. Ingrid Semanišínová, 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> ÚMV/SSM/15		<b>Course name:</b> Seminar on school mathematics			
<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> During the semester will be 3 written exams. Evaluation A - at least 90% of the points, evaluation B - at least 80%, evaluation C at least 70%, evaluation D at least 60%, evaluation E rating of at least 50% of the points. Credits shall not be granted to a student who receives less than 50% of the points.					
<b>Learning outcomes:</b> Students become familiar with the tasks, methods of problem solving, solving strategies and with specific problems of teaching mathematics at primary and secondary schools.					
<b>Brief outline of the course:</b> Basic knowledge of school mathematics. Number theory tasks, tasks to optimize, word problems.					
<b>Recommended literature:</b> Hecht, T., Sklenáriková, Z., Metódy riešenia matematických úloh, Bratislava, SPN, 1992. Hecht, T. a kol., Matematika pre 1.-4. ročník gymnázií a SOŠ, OrbisPictusIstropolitana, Bratislava 1999-2002. Krantz, S.G., Techniques of Problem Solving, AMS, 1997. Larson, L.C., Metódy riešenia matematických problémov, Bratislava, Alfa, 1990.					
<b>Course language:</b> Slovak					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 66					
A	B	C	D	E	FX
57.58	42.42	0.0	0.0	0.0	0.0
<b>Provides:</b> doc. RNDr. Matúš Harminc, CSc.					
<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> 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: Sommerfeld'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> ÚMV/ SVK/10		<b>Course name:</b> Students 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> I., II.					
<b>Prerequisites:</b>					
<b>Conditions for course completion:</b>					
<b>Learning outcomes:</b> Individual scientific work of students. Publishing of obtained results in a written form and as a public presentation.					
<b>Brief outline of the course:</b>					
<b>Recommended literature:</b> With respect to the research problematics (article in journals, books).					
<b>Course language:</b> Slovak or English					
<b>Notes:</b>					
<b>Course assessment</b> Total number of assessed students: 101					
A	B	C	D	E	FX
99.01	0.99	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>					