University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚMV/ AIM/10	Course name: Application of ICT into mathematics teaching
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 28 esent
Number of credits: 2	
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities: ÚMV	/DDMa/14
Conditions for cours two tests elaborated of final project	e completion: on the computer, solving problems from worksheets
Learning outcomes: To learn students star systems and to provid in mathematics teach and modelling in the and evaluation abiliti meaningful use of mo	idard work procedures with the basic types of mathematical softvare de examples and ideas on the possibility of using these software systems ing. To develop the knowledge and skills of students to use investigation digital environment for mathematical problems solving. Develop creative es of students allow to prepare mathematics lessons with effective and odern technologies.
Brief outline of the c Possibilities of using Use of dynamic geor implementation of co and solving of proble knowledge in mathem	ourse: numerical and graphical tools of spreadsheet to solve mathematical problems. metry systems in solving geometry problems, examples of their use in the onstructivist approaches to mathematics teaching. Mathematical modelling ems in a CAS environment. The use of modern IT for active acquisition of natics teaching.
Recommended litera M. Černochová et al. S. Lukáč: Multimédia J. Vaníček: Počítačov 2009. Journals MFI, MIF a	ture: : Využití počítače při vyučování, Portál, 1998. á a počítačom podporované učenie sa v matematike, PF UPJŠ Košice 2001. vé kognitivní technologie ve výuce geometrie. Univerzita Karlova v Praze, Obzory matematiky, fyziky a informatiky.
Course language: Slovak	
Course assessment Total number of asses	ssed students: 203

	r	r	r	r	1
А	В	С	D	Е	FX
40.39	29.06	14.29	9.85	6.4	0.0

Provides: doc. RNDr. Stanislav Lukáč, PhD.

Date of last modification: 27.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univers	sity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚF ASFU/15	V/ Course na	ame: Astrophysic	CS		
Course type, sc Course type: I Recommended Per week: 3 Pe Course metho	ope and the me Lecture d course-load (h er study period: d: present	thod: ours): 42			
Number of crea	dits: 3				
Recommended	semester/trime	ster of the cours	e: 3.		
Course level: II	•				
Prerequisities:					
Conditions for Test within the Oral exam with	course completi curriculum prese preparation; 3 q	ion: ented during the c uestions within th	ourse; seminar e ne curriculum pr	essay. resented during th	e course.
Learning outco Become acquai	mes: nted with basic k	nowledge about	the structure and	l evolution of the	universe.
Brief outline of The stars, their universe. Cosm	the course: basic properties, ological theories	structure and evo , formation, evol	olution. Structure	e and distribution of the universe.	of matter in the
Recommended 1. Carroll, B. W Publishing Com 2. Contopoulos 1984; 3. Narlikar, J.V. 4. Pasachoff, J.I University Pres	literature: <i>V.</i> , Ostlie, D. A., Appany, Reading, 2 , D. Kotsakis, Co ,An Introduction M., Filippenko, <i>A</i> s, 2013;	An Introduction t Massachusetts, 19 osmology, the stru to Cosmology, C A., The Cosmos:	to Modern Astro 996; acture and evolu Cambridge Univ Astronomy in th	physics, Addison tion of the Univer ersity Press, Cam le New Millenniu	-Wesley rse, Springer, bridge, 2002; m, Cambridge
Course languag Slovak, English	ge:				
Course assessm Total number of	ent f assessed studen	its: 8			
А	В	С	D	E	FX
87.5	12.5	0.0	0.0	0.0	0.0
Provides: doc. 1	RNDr. Rudolf Ga	ális, PhD.			
Date of last mo	dification: 23.02	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RND	Dr. Peter Kollár, D f Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Oľga (Drosová,

University: P. J	. Šafárik Univers	sity in Košice				
Faculty: Facult	y of Science					
Course ID: ÚM ATA/14	IV/ Course na	Course name: Algebra and theoretical arithmetic				
Course type, sc Course type: 1 Recommended Per week: 3 / 2 Course metho	ope and the me Lecture / Practice d course-load (h l Per study peri d: present	thod: e ours): od: 42 / 14				
Number of crea	dits: 4					
Recommended	semester/trime	ster of the course	e: 3.			
Course level: II	•					
Prerequisities:						
Conditions for It is based on th	course complet the results of write	ion: en and oral exam				
Learning outco Obtain knowled and the orderigs	mes: lge about sets N, s on them.	Z, Q and R, abou	it their axiomati	ic building-up, the	operations	
Brief outline of Sets of numbers	the course: S N, Z, Q a R, the	eir axiomatical bu	ilding, operatio	ns and ordering.		
Recommended J. Blažek a kol. K. Hruša: Elem W. Sierpinski: A T. Šalát a kol.:	literature: Algebra a teore entární aritmetik Arytmetyka teore Algebra a teoreti	tická aritmetika I. a. Přírodovědecké etyczna. PWN, Va cká aritmetika (2)	díl. SPN, Prah é vydavatelství, ršava 1966 . Alfa, Bratislav	a 1983 Praha 1953 va - SNTL Praha 1	1986	
Course languag Slovak	ge:					
Course assessm Total number of	ent f assessed studer	nts: 55				
А	В	C	D	Е	FX	
52.73	23.64	9.09	12.73	1.82	0.0	
Provides: doc.]	RNDr. Matúš Ha	rminc, CSc.		·		
Date of last mo	dification: 27.02	2.2018				
Approved: Gua CSc.Guaranteep	ranteeprof. RNE prof. RNDr. Joze	Dr. Peter Kollár, D f Doboš, CSc.	rSc.Guaranteep	orof. PhDr. Ol'ga C)rosová,	

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚM DDMa/14	Se ID: ÚMV/ a/14Course name: Didactics of mathematics				
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present					
Number of cree	lits: 5				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	•				
Prerequisities:					
Conditions for Continuous ass	course completi essment - 60% of	on: f the total assessm	nent, exam - 40%	6 of the total asse	essment.
Learning outco Master the basi schools. Gain k	mes: c principles and i nowledge of the	nethods of teach various ways of t	ing of mathemati teaching specific	cs at primary and topics of school	d secondary mathematics.
Brief outline of the course: 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 Recommended literature: [11] M Heiný a kol : Teorie vyučovanja 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) 					
Course languag Slovak	ge:				
Course assessm Total number of	tent f assessed studen	ts: 120			
A	В	С	D	Е	FX
37.5	38.33	15.83	5.83	2.5	0.0

Provides: doc. RNDr. Dušan Šveda, CSc.

Date of last modification: 27.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚMV/ DDMb/14	Course name: Didactics of mathematics
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent
Number of credits: 4	
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities: ÚMV	/DDMa/14
Conditions for cours Seminar paper - 40% Written exam - 40% of Homework - 20% of Evaluation A - at leas evaluation B - at leas evaluation C at least evaluationD at least of evaluationE rating of Credits shall not be g	e completion: of the total score. of the total score. the total score. st 90% points, t 80%, 70%, 60%, at least 50% of the points. ranted to a student who receives less than 50% of the points.
Learning outcomes: Students become fam different teaching me potential use of histor educational process, t	tiliar with some mathematical theories of education. They will acquire thods of selected topics of school mathematics. Become familiar with the ry of mathematics in teaching. Students will be prepared to work in the focusing on the creative application of knowledge in mathematics.
Brief outline of the c Student learning proc Language of mathem Using history of math Students' learning dif Teaching mathematic Combinatorics, proba Calculus. Developing mathema Recommended litera [1] M.Hejný a kol.: T [2] Hejný, M., Kuřina Portál, Praha 2001.	ourse: ess. atics, enactive iconic and symbolic representation. hematics in the teaching mathematics. ficulties and their possible causes. al proofs. bility, statistics. tical creativity. Motivation. fure: Yeoria vyučovania matematiky, SPN Blava 1989. a, F.: Dítě, škola a matematika: Konstruktivistické přístupy k vyučování.
[[3] Fischer, R., Malle [4] Učebnice a zbierk	, G.: Clovek a matematika, SPN Bratislava 1992. zy úloh pre stredné a základné školy.

Course languag Slovak	ge:				
Course assessm Total number o	nent f assessed studen	ts: 136			
А	В	С	D	Е	FX
79.41	15.44	3.68	0.74	0.74	0.0
Provides: RND	Provides: RNDr. Ingrid Semanišinová, PhD.				
Date of last modification: 27.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ DEJ1/99	Course name: History of Physics
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 28 esent
Number of credits: 2	
Recommended seme	ster/trimester of the course: 2.
Course level: I., II.	
Prerequisities:	
Conditions for cours written test and thesis exam	se completion:
Learning outcomes: Basic facts in the hist	ory of physics.
Brief outline of the c Evolution of knowled world. Evolution and evolution of the theor and their application natural sciences and p	ourse: dge before Galileo. Evolution of physics within the mechanical picture of the d limits of classical physics, phase of breakthrough in physics. Origin and ry of relativity. Quantum physics and prospects of further evolution of physics . Contemporary state of physical research and its application in technology, philosophy. Position of physics in our society.
Recommended litera 1. R.Zajac, J.Chrapar 2. V.Malíšek: Co víte 3. I.Kraus, Fyzika v k Praha, 2006. 4. A.I.Abramov: Istor 5. L.I.Ponomarev: Po 6. I.Kraus, Fyzika v k ČVUT, Praha, 2007. 7. I.Kraus, Fyzika od 8. I.Štoll, Dějiny fyzi 9. www-pages. 10.Brandt S., The han 2009.	nture: n: Dejiny fyziky, skriptá, MFF UK, Bratislava, 1982. o dějinách fyziky, Horizont, Praha, 1986. kulturních dějinách Evropy, Starověk a středověk, Nakladatelství ČVUT, ria jadernoj fiziky, KomKniga, Moskva, 2006. od znakom kvanta, Fizmatlit, Moskva, 2006. kulturních dějinách Evropy, Od Leonarda ke Goethovi, Nakladatelství Thaléta k Newtonovi, Academia, Praha, 2007. ky, Prometheus, Praha, 2009. svest of a century, Discoveries of modern physics in 100 episodes, Oxford,
Course language:	
Course assessment Total number of asses	ssed students: 24

А	В	С	D	Е	FX
83.33	8.33	8.33	0.0	0.0	0.0
Provides: prof. RNDr. Stanislav Vokál, DrSc.					
Date of last modification: 26.09.2017					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	y of Science				
Course ID: ÚF DEX/15	V/ Course na	me: Selected De	emonstration Exp	periments	
Course type, sc Course type: I Recommended Per week: 2 / 1 Course metho	ope and the met Lecture / Practice I course-load (h Per study peri d: present	thod: ours): od: 28 / 14			
Number of crea	lits: 3				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II					
Prerequisities:					
Conditions for Seminar work – Oral examination	course completi a project dealin m	on: g with hands-on	experiments and	their role in Phys	sics teachig.
Learning outco The goal of the through non-tra	mes: course is to deve ditional physical	elop pedagogic sk experiments.	cills and creativit	ty of further Phys	ics teachers
The aim of the help students un experiments are any special equ experiments stu theoretical know	e lecture is to a nderstand physic mainly hands-on ipment. The exp dents are able to vledge.	show a lot of r cal phenomena and n ones which can periments are can gain practical sk	ion-traditional p nd find their cor be performed w rried out by stud tills, develop exp	hysical experime nection with even ith simple tools and lents themselves. perimental habits	ents which can eryday life. The nd don't require Through these and verify their
 Recommended literature: 1. Onderová Ľ.: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, Ľ.: Fyzika každodenného života v experimentoch a úlohách, JSMF Bratislava 2001, ISBN 80-7097-446-X 5. http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm 					
Course languag Slovak	ge:				
Course assessm	ent				
	assessed studen	ts: 2	п	F	FY
л 100 0	0.0		0.0		
Duovidas. Das 1	U.U Dr. Ivoto Štafarži		0.0	0.0	0.0
rrovides: Paedl		1110va, Ph.D.			
Date of last mo	aitication: 01.02	0.2018			

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P I	Šafárik Univer	sity in Košice			
Faculty: Faculty	v of Science				
Course ID: LIE		ama. Didactica o	f Dhysics I		
DF1a/15		ame. Didactics o	1 T Hysics I		
Course type, sc Course type: I Recommended Per week: 2 / 2 Course metho	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present				
Number of cred	lits: 4				
Recommended	semester/trim	ester of the cours	e: 2.		
Course level: II					
Prerequisities:					
teaching plan for micro teaching educational pro answering ques end-of course o	Conditions for course completion: teaching plan for two lessons 10p micro teaching activities 20p educational project 20p answering questions during the course 10p				
Learning outco Knowledge and education, basic problem solving	Learning outcomes: Knowledge and skills in the field of Physics education, overview about the problems of Physics education, basic skills necessary to prepare and quide educational activities, school experiments, problem solving and to use modern media for physics education.				
Brief outline of Within the Dida case studies of t activities, their are trained.	the course: actics of Physics heir solving are evaluation and	s subject the core p interpreted. Strate the use of moder	problems of phys egies on design an n media are intro	ics education are ad implementation oduced and corre	introduced and n of educational esponding skills
Recommended literature: 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 actuall didactic publications					
Course languag Slovak, English	ge:				
Course assessm	ent	nts [.] 9			
A	B	C	D	Е	FX
55.56	44.44	0.0	0.0	0.0	0.0
		1		l	

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

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafán	ik University in Košice
Faculty: Faculty of So	vience
Course ID: ÚFV/ DF1b/15	Course name: Didactics of Physics II
Course type, scope at Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: e / Practice se-load (hours): study period: 28 / 28 sent
Number of credits: 4	
Recommended semes	ster/trimester of the course: 3.
Course level: II.	
Prerequisities: ÚFV/	DF1a/15
Conditions for cours teaching plan for two micro teaching activit educational project 20 answering questions of end-of course oral exa	e completion: lessons 10p ies 20p p luring the course 10p amination 40p
Learning outcomes: knowledge and skills education, basic skills problem solving and t	in the field of Physics education, overview about the problems of Physics necessary to prepare and quide educational activities, school experiments, o use modern media for physics education
 Brief outline of the control of the contro	Purse: Forms and tools in physics education and assessment of students results, nd its application in education easurements: nd multimedia in education to support physics education , science teacher training ect presentation
Recommended litera 1.J. Janovič a kol.: Di 2.J. Janovič a kol.: Vy 3.E. Kašpar a kol.: Di 4.E. Mechlová: Didak 5.J. Fenclová: Úvod č 6.Vachek, J. a kol.: Fy 7.Svoboda, E. a kol. H 8.Lepil, O. a kol.: Fy	ture: daktika fyziky, MFF UK Bratislava, 1990 brané kapitoly didaktiky fyziky, MFF UK Bratislava, 1999 daktika fyziky, SPN Praha, 1978 tika fyziky 1, 2, PdF Ostrava, 1989 lo teórie a metodológie didaktiky fyziky, SPN Praha, 1982 vzika pre 1. ročník gymnázia. SPN, Bratislava, 1984. Fyzika pre 2. ročník gymnázia. SPN, Bratislava, 1985.

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

Course assessment

Total number of assessed students: 9

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

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

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafa	irik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚMV/ DFR/10	Course name: Differential equations					
Course type, scope a Course type: Lectu Recommended cou Per week: 3 / 1 Per Course method: pr	and the method: re / Practice arse-load (hours): study period: 42 / 14 esent					
Number of credits:	5					
Recommended seme	ester/trimester of the course: 1.					
Course level: I., II.						
Prerequisities:						
Conditions for cour Continuous assessm given by continuous	se completion: ent is taken the form of two tests during the semester. Final evaluation is assessment (40%), written and oral part of the exam (30% and 30%).					
Learning outcomes: Theory of differentia numerous applicatio course is to familiari and their systems, ar We consider them as	Il equations is one of the fundamental areas of mathematical analysis. It has ns in various fields of science and technology. The main objective of this ze students with the basics of the theory of ordinary differential equations ad methods for solving certain types of differential equations and systems. a possible mathematical models of real situations.					
Brief outline of the Basic concepts. Ele equations. The existe of the first order, the equations of the n-th differential systems of solutions to Cauc structure of general equations and system Euler differential equ	mentary methods for solving and applications of the first order differential ence and uniqueness of solutions to Cauchy problem for differential equations in the order and for differential systems. The relationship between differential order and systems. Linear differential equations of the n-th order and linear - the local and global theorem on the existence and uniqueness thy problem, basic properties of solutions, fundamental system of solutions, solution, Lagrange method of variation of constants, linear differential ns with constant coefficients. Reduction of the order of differential equations. Elimination method for solving the systems of differential equations.					
Recommended liter 1. L. Kluvánek, I. M 2. J. Eliaš, J. Horvát Slovak). 3. S. J. Farlow: An in Publications, New Y 4. W. Kohler, L. Joh Pearson Education, I 5. M. Tenenbaum: C 6. J. C. Robinson: A Press, Cambridge, 20	ature: išík, M. Švec: Matematika II, SVTL, Bratislava, 1961 (in Slovak). n, J. Kajan: Zbierka úloh z vyššej matematiky 3, Alfa, Bratislava, 1980 (in ntroduction to differential equations and their applications, Dover ork, 2006. nson: Elementary differential equations with boundary value problems, Boston, 2006. rrdinary differential equations, Dover Publications, New York, 1985. n introduction to ordinary differential equations, Cambridge University 004.					

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

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Course langua Slovak	ge:								
Course assessment Total number of assessed students: 442									
А	В	B C D E FX							
17.42	11.99	20.36	17.87	25.79	6.56				
Provides: Mgr. Jozef Kiseľák, PhD.									
Date of last modification: 27.02.2018									
Approved: Gua CSc.Guaranteep	aranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, E Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Ol'ga C)rosová,				

University: P. J.	. Šafárik Univers	ity in Košice							
Faculty: Faculty	Faculty: Faculty of Science								
Course ID: ÚM DGE/10	Course ID: ÚMV/ Course name: Dynamic geometry DGE/10								
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method: present									
Number of crea	lits: 3								
Recommended	semester/trimes	ster of the cours	e: 3.						
Course level: II	•								
Prerequisities:									
Conditions for test using a com	course completi puter, didactic p	on: roject and final e	exam						
Learning outcomes: 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. Brief outline of the course: 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, intersetion lines and solid figures. Analysis of the possibilities of using dynamic geometry environment to support active learning of mathematics.									
 Recommended literature: 1. Vaníček, 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. 									
Course language: Slovak									
Course assessm Total number of	ent f assessed studen	ts: 25							
А	В	С	D	Е	FX				
56.0	32.0	8.0	4.0	0.0	0.0				

Provides: doc. RNDr. Stanislav Lukáč, PhD.

Date of last modification: 27.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J.	Šafárik Univers	ity in Košice						
Faculty: Faculty	of Science							
Course ID: ÚFV/ DPOU/14Course name: Diploma Thesis and its Defence								
Course type, sc Course type: Recommended Per week: Per Course method	ope and the met l course-load (h · study period: d: present	hod: ours):						
Number of cred	lits: 15							
Recommended	semester/trimes	ter of the cours	e:					
Course level: II								
Prerequisities:								
Conditions for Preparation and Presentation of	course completi submission of d diploma thesis re	on: iploma thesis in p esults and its defe	printed and elecence in front of	ctronic form.	d.			
Learning outco Knowledge and thesis results in	mes: skills connected front of experts.	with selected pr	oblem analysis	and presentation of	of diploma			
Brief outline of Preparation and Printed version Presentation of Discussion on t members.	the course: submission of d for reviewing. diploma thesis re he content of di	iploma thesis to esults and answer ploma thesis and	central registrat s to the questic l answers to th	tion system. ons of reviewrs. e questions of exa	amination board			
Recommended	literature:							
Course languag	ge:							
Course assessm Total number of	ent Sassessed studen	ts: 18						
A	В	С	D	E	FX			
77.78	11.11	11.11	0.0	0.0	0.0			
Provides:				÷	·			
Date of last mo	dification: 01.03	.2018						
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	r. Peter Kollár, D Doboš, CSc.	DrSc.Guarantee	prof. PhDr. Oľga (Drosová,			

University: P. J. Šafá	rik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚFV/ DPP1/14	Course ID: ÚFV/ Course name: Diploma Project I DPP1/14						
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent						
Number of credits: 1							
Recommended seme	ster/trimester of the co	urse: 1					
Course level: II.							
Prerequisities:							
Conditions for cours regular consultations development, design	e completion: with diploma thesis sup of investigation plan	ervisor about the progress of diploma project					
Learning outcomes: Student has studied the investigation plan, has	ne theoretical backgroun s presented first results,	d, formulates research questions, has designed eventually.					
Brief outline of the c Development of diplo	ourse: oma project						
Recommended literat Recommended literat Regulations for diplo template for diploma	ture: ure that is included in th ma thesis preparation thesis	e diploma thesis assignments					
Course language: Slovak							
Course assessment Total number of asses	ssed students: 10						
	abs n						
	100.0 0.0						
Provides:							
Date of last modifica	tion: 01.03.2018						
Approved: Guarantee CSc.Guaranteeprof. R	eprof. RNDr. Peter Kollá NDr. Jozef Doboš, CSc.	r, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová,					

University: P. J. Šafá	rik University in Ko	išice					
Faculty: Faculty of S	cience						
Course ID: ÚFV/ DPP2/14	se ID: ÚFV/ Course name: Diploma Project II /14						
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent						
Number of credits: 2							
Recommended seme	ster/trimester of th	e course: 2.					
Course level: II.							
Prerequisities:							
Conditions for course regular consultations development and about regular consultations study of available rest first results	e completion: with diploma thesis ut the investigation ources connected w	supervisor about the progress of diploma project ith the diploma thesis assignments					
Learning outcomes: Student understands	he methods of invest	stigation and he gains first results.					
Brief outline of the c Work on the diploma	ourse: project with regard	to the assignemnts of the diploma thesis					
Recommended litera Recommended literat Regulations for diplo template for diploma	ture: ure that is included ma thesis preparation thesis	in the diploma thesis assignments					
Course language: Slovak							
Course assessment Total number of asse	ssed students: 10						
	abs	n					
100.0 0.0							
Provides:							
Date of last modifica	tion: 01.03.2018						
Approved: Guarantee CSc.Guaranteeprof. R	eprof. RNDr. Peter H NDr. Jozef Doboš,	Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.					

University: P. J. Šafá	rik University in Košio	ce				
Faculty: Faculty of S	cience					
Course ID: ÚMV/ Course name: Diploma Project I DPP2a/14						
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: sent					
Number of credits: 1						
Recommended seme	ster/trimester of the	course: 1				
Course level: II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	ture:					
Course language: Slovak						
Course assessment Total number of asses	ssed students: 88					
	abs	n				
100.0 0.0						
Provides: doc. RNDr	Dušan Šveda, CSc.					
Date of last modifica	tion: 27.02.2018					
Approved: Guarantee CSc.Guaranteeprof. R	eprof. RNDr. Peter Ko NDr. Jozef Doboš, CS	llár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, Sc.				

University: P. J. Šafá	University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science								
Course ID: ÚMV/ DPP2b/14	Course ID: ÚMV/ Course name: Diploma Project II DPP2b/14							
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of credits: 2		2						
Recommended seme	ster/trimester of the cours	e: 2.						
Course level: 11.								
Prerequisities: UMV	/DPP2a/14							
Conditions for cours	e completion:							
Learning outcomes:								
Brief outline of the c	ourse:							
Recommended litera	ture:							
Course language: Slovak								
Course assessment Total number of asses	ssed students: 89							
	abs n							
98.88 1.12								
Provides: prof. RNDr. Jozef Doboš, CSc.								
Date of last modification: 27.02.2018								
Approved: Guarantee CSc.Guaranteeprof. R	Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J. Šafá	University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science							
Course ID: ÚMV/ DPP2c/14	Course ID: ÚMV/ Course name: Diploma Project III DPP2c/14						
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: sent						
Number of creats: 2	stau/twimestau of the ac						
Course levels II	ster/trimester of the co						
Course level: II.							
Prerequisities: UMV	/DPP26/14						
Conditions for cours	e completion:						
Learning outcomes:							
Brief outline of the c	ourse:						
Recommended litera	ture:						
Course language: Slovak							
Course assessment Total number of asses	ssed students: 72						
	abs	n					
100.0 0.0							
Provides:		·					
Date of last modifica	tion: 27.02.2018						
Approved: Guarantee CSc.Guaranteeprof. R	prof. RNDr. Peter Kollá NDr. Jozef Doboš, CSc.	r, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová,					

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚFV/ DPP3/14	Course ID: ÚFV/Course name: Diploma Project IIIOPP3/14					
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): ly period: esent					
Number of credits: 2						
Recommended seme	ster/trimester of the co	ourse: 3.				
Course level: II.						
Prerequisities:						
Conditions for cours regular consultations development and abc	e completion: with diploma thesis sup out the project results	ervisor about the progress of diploma project				
Learning outcomes: Student has enough k part based on the pro-	nowledge to prepare a t blem analysis and drawi	heoretical part of the diploma thesis and for practical ng conclusions.				
Brief outline of the c Work on the project v	ourse: with regard to the diplon	na thesis assignments				
Recommended literat Recommended literat Regulations for diplo template for diploma	iture: Ture that is included in the ma thesis preparation thesis	e diploma thesis assignments				
Course language: Slovak						
Course assessment Total number of asse	ssed students: 18					
	abs	n				
100.0 0.0						
Provides:						
Date of last modifica	tion: 01.03.2018					
Approved: Guarantee CSc.Guaranteeprof. R	eprof. RNDr. Peter Kolla NDr. Jozef Doboš, CSc	ár, DrSc.Guaranteeprof. PhDr. Oľga Orosová,				

University: P. J.	Šafárik Univers	ity in Košice						
Faculty: Faculty	of Science							
Course ID: ÚM DPU/14	Ourse ID: ÚMV/Course name: Magister Thesis and its DefensePU/14							
Course type, sco Course type: Recommended Per week: Per Course methoo	ope and the met l course-load (h study period: d: present	hod: ours):						
Number of cred	lits: 15							
Recommended	semester/trimes	ster of the cours	se:					
Course level: II.								
Prerequisities:								
Conditions for o	course completi	on:						
Learning outco	mes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag Slovak	e:							
Course assessm Total number of	ent assessed studen	ts: 18						
А	В	С	D	E	FX			
88.89	11.11	0.0	0.0	0.0	0.0			
Provides:					-			
Date of last mod	dification: 27.02	2.2018						
Approved: Guar CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	r. Peter Kollár, I `Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Oľga (Drosová,			

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ FEP1/07	Course name: Microcomputer Based Science Laboratory
Course type, scope a Course type: Lectur Recommended cou Per week: 1 / 2 Per Course method: pro	and the method: re / Practice rse-load (hours): study period: 14 / 28 esent
Number of credits: 4	4
Recommended seme	ester/trimester of the course:
Course level: II.	
Prerequisities:	
Conditions for cours test 30 points active participation 1 project (development points The final assessment	se completion: 0 points t of mathematical model, videomeasurement and physical experiment) 60 is based on the sum of partial results
After the course stud support active learnin data with the help of processes. Student is learning and concept	ent gains an overview about the possible use of digital technologies to ng in science. He gains skills to use and develop activities on measuring datalogging, measuring on picture and viderecording and modeling natural able to implement such activities in science teaching to support active ual understanding.
Brief outline of the of The aim of the cours in science with the modeling is based of carry out computer-b corresponding mode emphasize is put on to ' learning.	course: rse is to present the use of digital technologies to enhance active learning help of datalogging, videomeasurement and modeling tools. Mathematical on dynamical modeling of natural phenomena. Within the course students ased experiments, videomeasurements and measurement on picture and create ls. The activities involve selected topics of secondary schools science. The the methods of implementation of the activities with regard to active students
Recommended litera [1]Koubek, V., Pecer podporovanom labor [2]Príručka COACH [3]http://physedu.sci	ature: n, I.: Fyzikálne experimenty a modely v školskom mikropočítačom atóriu, Univerzita Komenského, Bratislava, 1999 ence.upjs.sk/sis/fyzika/experimenty/index.htm
Course language: Slovak	
Course assessment Total number of asse	ssed students: 34

А	В	С	D	Е	FX		
44.12	44.12	11.76	0.0	0.0	0.0		
Provides: doc. RNDr. Zuzana Ješková, PhD.							
Date of last modification: 01.03.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ FEP1/15	Course name: School Computer-Based Physical Laboratory
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of credits: 3	
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
Conditions for cours The final assessment Test 30 points active participation 1 project (development points	e completion: is based on the sum of partial results 0 points of mathematical model, videomeasurement and physical experiment) 60
Learning outcomes: After the course study support active learning with the help of datal processes. Student is learning and concept	ent gains an overview about the possible use of digital technologies to ng in physics. He gains skills to use and develop activities on measuring data ogging, measuring on videorecordings and picture and modeling physical able to implement such activities in physics teaching to support active ual understanding.
Brief outline of the c The aim of the cour in science with the h modeling tools. Math Within the course s measurement on the p of secondary school activities with regard	ourse: see is to present the use of digital technologies to enhance active learning help of datalogging, videomeasurement, measurement from the picture and hematical modeling is based on dynamical modeling of physical phenomena. students carry out computer-based experiments, videomeasurements and picture and create corresponding models. The activities involve selected topics physics. The emphasize is put on the methods of implementation of the to active students' learning.
Recommended litera [1]Koubek, V., Pecem podporovanom labora [2]Príručka COACH [3]http://physedu.scie	n ture: a, I.: Fyzikálne experimenty a modely v školskom mikropočítačom atóriu, Univerzita Komenského, Bratislava, 1999 ence.upjs.sk/sis/fyzika/experimenty/index.htm
Course language: Slovak	
Course assessment Total number of asses	ssed students: 8

А	В	С	D	Е	FX		
87.5	12.5	0.0	0.0	0.0	0.0		
Provides: doc. RNDr. Zuzana Ješková, PhD.							
Date of last modification: 01.03.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J. Šafárik University in Košice Faculty: Faculty of Science Course ID: ÚFV/ Course name: Solid State Physics FKS/15 Course type, scope and the method: Course type, scope and the method: Course type. Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: coral examination Corstal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course assessment Total number of assessed students: 7 A A B C D F FX 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., pr								
Faculty of Science Course ID: ÚFV/ Course name: Solid State Physics FKS/15 Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 1. Course level: II. Perequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature:	University: P. J.	. Šafárik Univers	sity in Košice					
Course ID: ÚFV/ FKS/15 Course type, scope and the method: Course type, Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: oral examination Image: Course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSe. D E FX 42.86 42.80 14.29 0.0 0.0 0.0 A B C D E FX<	Faculty: Faculty	y of Science						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 14.29 0.0 0.0 0.0 Provides:	Course ID: ÚF FKS/15	ourse ID: ÚFV/ Course name: Solid State Physics KS/15						
Number of credits: 3 Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc. Guaranteeprof. PhDr. Ofga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present							
Recommended semester/trimester of the course: 1. Course level: II. Prerequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course assessment Total number of assessed students: 7 A B C D E FX 42.86 A general indification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc. Guaranteeprof. PhDr. Ofga Orosová, CSc.	Number of crea	lits: 3						
Course level: II. Prerequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Recommended	semester/trimes	ster of the cours	e: 1.				
Prerequisities: Conditions for course completion: oral examination Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ofga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Course level: II	•						
Conditions for course completion: oral examinationLearning outcomes: A general introductory course in solid state physics and material science.Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics.Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976.Course language:Course assessment Total number of assessed students: 7ABCDEFX42.8642.8614.290.00.00.0Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Prerequisities:							
Learning outcomes: A general introductory course in solid state physics and material science. Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Conditions for oral examinatio	course completi n	on:					
Brief outline of the course: Crystal structures and methods of structure analysis. Defects in crystalline solids. Chemical bonding in solids. Thermal properties of crystal lattice. "Free" electrons in metals. The electronic band structure of solids. Transport phenomena in metals and semiconductors. Superconductivity and superfluidity. Magnetic properties of solids. New problems of condensed matter physics. Recommended literature: H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993. Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976. Course language: Course language: Value D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc. CSc.	Learning outco A general introd	mes: ductory course ir	solid state physic	ics and material s	cience.			
Recommended literature:H. Ibach, H. Lüth: Solid-State Physics. Springer - Verlag, Berlin, 1993.Ch. Kittel: Introduction to Solid State Physics. John Wiley & Sons, Inc. 1976.Course language:Course assessmentTotal number of assessed students: 7ABCDEFX42.8642.8614.290.0O.00.0Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Brief outline of Crystal structure in solids. Therr structure of sol superfluidity. M	the course: es and methods o nal properties o ids. Transport p lagnetic propertie	f structure analys f crystal lattice. henomena in me es of solids. New	is. Defects in crys "Free" electrons tals and semicor problems of con	stalline solids. Cl in metals. The inductors. Superc idensed matter p	hemical bonding electronic band conductivity and hysics.		
Course language: Course assessment Total number of assessed students: 7 A B C D E FX 42.86 42.86 14.29 0.0 0.0 0.0 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc. Dite State St	Recommended H. Ibach, H. Lü Ch. Kittel: Intro	literature: th: Solid-State P oduction to Solid	hysics. Springer State Physics. Jo	- Verlag, Berlin, bhn Wiley & Son	1993. s, Inc. 1976.			
Course assessment Total number of assessed students: 7ABCDEFX42.8642.8614.290.00.00.0Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Course language:							
ABCDEFX42.8642.8614.290.00.00.0Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.Date of last modification: 01.03.2018Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Course assessment Total number of assessed students: 7							
42.8642.8614.290.00.00.0Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.Date of last modification: 01.03.2018Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	A B C D E FX							
 Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc. Date of last modification: 01.03.2018 Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc. 	42.86	42.86 42.86 14.29 0.0 0.0 0.0						
Date of last modification: 01.03.2018Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Provides: Dr.h.c. prof. RNDr. Alexander Feher, DrSc., prof. RNDr. Peter Kollár, DrSc., prof. Ing. Martin Orendáč, CSc.							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.	Date of last modification: 01.03.2018							
	Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	Dr. Peter Kollár, E f Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga	Orosová,		

University: P. J	. Šafárik Univers	sity in Košice					
Faculty: Facult	y of Science						
Course ID: ÚF FPK1/15	Course ID: ÚFV/ Course name: Phase Transitions and Critical Phenomena FPK1/15						
Course type, sc Course type: 1 Recommended Per week: 3 Pe Course metho	cope and the me Lecture d course-load (h er study period: d: present	thod: ours): 42					
Number of cree	dits: 3						
Recommended	semester/trime	ster of the course	e: 2.				
Course level: II							
Prerequisities:							
Conditions for Grade	course complet	ion:					
Learning outco To acquaint stu	mes: dents with based	problems of the p	phase transition	s and critical pher	nomena.		
Brief outline of the course: Thermodynamics of phase transitions. Classification of phase transitions. Critical phenomena, universality. Microscopic models of the magnetic phase transitions. Ising model in one and two dimensions. Mean field theory of the Ising model. Landau theory of phase transitions.							
Recommended 1. Stanley H.G. Oxford, Oxford 2. Reichl L.E.: 3. Plischke M., 4. Kadanoff L.H Singapore, 200	literature: : Introduction to l, 1971. A Modern Cours Bergersen B.: Ed P.: Statistical Phy 0.	Phase Transitions te in Statistical Ph quilibrium Statisti sics, Statistics, D	s and Critical P sysics, Universi ical Physics, W ynamics and Re	henomena, Claren ty of Texas Press, orld Scientific, Sin enormalization, W	ndon Press Austin, 1980. ngapore, 1994. Vorld Scientific,		
Course languaş Slovak	ge:						
Course assessment Total number of assessed students: 44							
А	В	C	D	E	FX		
72.73	72.73 9.09 4.55 6.82 6.82 0.0						
Provides: prof.	RNDr. Andrej B	obák, DrSc.		·	•		
Date of last mo	dification: 23.02	2.2018					
Approved: Gua CSc.Guaranteep	ranteeprof. RND	Dr. Peter Kollár, D f Doboš, CSc.	rSc.Guaranteer	orof. PhDr. Oľga (Drosová,		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ FYU1/15	Course name: Physical Problems
Course type, scope a Course type: Lectur Recommended cou Per week: 2 / 1 Per Course method: pro	and the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of credits: 3	3
Recommended seme	ester/trimester of the course: 1.
Course level: II.	
Prerequisities:	
Conditions for cours On- line set of proble seminar for testing o necessary. problem solving 40 p obtained problem 10 own problems 10 p oral examination 40 Final:	se completion: ems for self solving is avialable for students. One task is define for each f student preparation. Production and presentation of three own problems is p p
A 100-90 B 89-80 C	79-70 D 69-60 E 59-50 F 49-0
Learning outcomes: Students will be read school levels. Clasica knowledge anmd ski	y for using of problem solving strategies at lower and upper secondary al problems are studied in more details from different pont of view (students lls, technologies, motivation, computer modelling and measuremets).
Brief outline of the of Methods of problem Uding of modelling a	solving are presented and trained. The sets of typical problems are analysed. and real experiments is discussed.
Recommended litera 1.Baláž, P. : Zbierka 2.Bartuška,K: Postup I, Praha, Prometheus 3.Halpern, A.: 3000 4.Janovič,J., Koubek 5.Jurčová, M., Dohň žiakov a študentov. H 6.Kružík, M.: Sbírka 7.Lindner, H.: Riešen 8.Linhart, J. (1976): Králové, MAFY, 199 9.Pietrasiński, Z. (19 Hradec Králové, MA	 ature: úloh z fyziky, SPN Bratislava, 1971 při řešení fyzikálních úloh, Sbírka řešených úloh z fyziky pro střední školy , 1997, s. 5-10. solved problems in Physics, McGraw-Hill, Inc., USA, 1988 ,V. Pecen,I.: Vybrané kapitoly z didaktiky fyziky. Bratislava, UK, 1999, anská, J., Pišút, J., Velmovská, K.: Didaktika fyziky – rozvíjanie tvorivosti Bratislava, UK, 2001, úloh z fyziky pro žáky strědních škol, SPN, Praha, 1984 né úlohy z fyziky, Alfa, Bratislava, 1973 In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole. Hradec 98, 64): In: Volf, I.: Metodika řešení úloh ve výuce fyziky na základní škole.

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 soutěze 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 16.http://kekule.science.upjs.sk/fyzika

17.http://physedu.science.upjs.sk

Course language:

Slovak, English

Course assessment

Total number of assessed students: 10

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

Provides: doc. RNDr. Marián Kireš, PhD., doc. RNDr. Zuzana Ješková, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.
University: P. J	. Šafárik Univers	sity in Košice				
Faculty: Facult	y of Science					
Course ID: ÚM GEO2b/10	V/ Course n	ame: Geometry I	Ι			
Course type, sc Course type: 1 Recommended Per week: 3 / 2 Course metho	ope and the me Lecture / Practico d course-load (h 2 Per study peri d: present	thod: e iours): od: 42 / 28				
Number of cree	lits: 6					
Recommended	semester/trime	ster of the cours	e: 1.			
Course level: II	•					
Prerequisities:						
Conditions for	course complet	ion:				
Learning outco To obtain know	mes: ledge about affii	ne, isometric, and	similarity trans	formations and th	eir properties.	
 Quadric surfa Quadric surfa Affine transfand lines, pseud Isometric transfand lines, pseud Isometric transfand lines, pseud Similarity transfand transfand Geometry of pencils of circle Recommended M. Sekanina 	 Brief outline of the course: Quadric surfaces (circular and general quadric surfaces) Affine transformations (associated transformation, matrix representation, affinities, fixed points and lines, pseudo-reflections) Isometric transformations (matrix representation, isometries, classification in the plane, composition of reflections) Similarity transformations (matrix representation, similarities, homothety, composition of homotheties) Geometry of circles (the power of a point with respect to a circle, radical axis of two circles, pencils of circles) Recommended literature: M. G. L. Line (Construction) 					
 O. Šedivý et H.S.M. Coxe J.T. Smith, N 	al, Geometry 2, ter, Introduction Iethods of geom	SPN, 1987 (in slo to geometry, Wil etry, Wiley, 2000	ovak). ley, 1989.			
Course languag Slovak	Course language: Slovak					
Course assessm Total number o	Course assessment Total number of assessed students: 399					
А	В	С	D	Е	FX	
11.03	11.03 11.78 20.05 19.05 22.31 15.79					
Provides: RND	Provides: RNDr. Igor Fabrici, Dr. rer. nat., RNDr. Lucia Janičková					
Date of last mo	dification: 27.02	2.2018				
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J.	University: P. J. Šafárik University in Košice						
Faculty: Faculty	of Science						
Course ID: ÚM GEO2c/10	V/ Course na	Course name: Geometry III					
Course type, sco Course type: L Recommended Per week: 2 / 1 Course method	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present						
Number of cred	its: 4						
Recommended s	semester/trime	ster of the cours	e: 2.				
Course level: II.							
Prerequisities: (ÚMV/GEO2b/1	C					
Conditions for c	ourse complet	ion:					
Learning outcom A new look on the	nes: he classical geo	metric results.					
 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) Recommended literature: 1 H S M Coxeter S L Greitzer Geometry revisited MAA 1967 							
3. A.V. Akopyar	, Advanced Euc n, A.A. Zaslavsk	ruean geometry, xy, Geometry of c	onics, AMS, 20)07.			
4. D.A. Brannan	, M.F. Esplen, J	.J. Gray, Geometr	ry, Cambridge U	Univ. Press, 2007.			
Course language: Slovak							
Course assessment Total number of assessed students: 88							
Α	В	C	D	E	FX		
21.59	21.59 29.55 29.55 7.95 11.36 0.0						
Provides: RNDr. Igor Fabrici, Dr. rer. nat.							
Date of last mod	Date of last modification: 27.02.2018						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
Course ID: KSSFaK/ KJPUAP/15	Course na	Course name: Culture of Spoken Discourse				
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 1 Per study period: 14 / 14 Course method: present						
Number of cree	lits: 2					
Recommended	semester/trimes	ster of the cours	e: 1.			
Course level: II	- 					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	Course assessment Total number of assessed students: 0					
А	В	С	D	Е	FX	
0.0	0.0	0.0 0.0 0.0 0.0 0.0				
Provides: PhDr. Iveta Bónová, PhD.						
Date of last modification: 28.08.2017						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafá	rik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚTVŠ/ KP/12	ourse ID: ÚTVŠ/ Course name: Survival Course P/12						
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present						
Number of credits: 2							
Recommended seme	ster/trimester of the cours	e:					
Course level: I., II.							
Prerequisities:							
Conditions for cours Conditions for course Attendance Final assessment: cor	Conditions for course completion: Conditions for course completion: Attendance Final assessment: continuous fulfilment of all tasks within the course						
Students will be fami conditions as they wi and demanding situat course develops team require overcoming of	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						
Brief outline of the course: 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. Recommended literature: Course language:							
Total number of asses	ssed students: 365						
	abs n						
	44.38	55.62					

Provides: MUDr. Peter Dombrovský, Mgr. Marek Valanský

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
Course ID: KPPaPZ/KPE/ EPU/15	Course na	Course name: Professional Ethics for Teachers and School Counsellors				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present						
Number of cree			2.4			
Recommended	semester/trimes	ster of the cours	e: 2., 4.			
Course level: II	•					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	Course assessment Total number of assessed students: 281					
А	В	С	D	Е	FX	
94.66	4.63	0.71	0.0	0.0	0.0	
Provides: Mgr. Lucia Hricová, PhD.						
Date of last modification: 21.08.2017						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	science					
Course ID: ÚTVŠ/ LKSp/13	ÚTVŠ/ Course name: Summer Course-Rafting of TISA River					
Course type, scope a Course type: Practi Recommended cou Per week: Per stud Course method: pro	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present					
Number of credits: 2	2					
Recommended seme	ester/trimester of the cours	e:				
Course level: I., II.						
Prerequisities:						
Conditions for cours Conditions for course Attendance Final assessment: Ra	Conditions for course completion: Conditions for course completion: Attendance Final assessment: Raft control on the waterway (attended/not attended)					
Learning outcomes: Learning outcomes: Students have knowl	edge of rafts (canoe) and the	eir control on waterway.				
Brief outline of the course: 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						
Recommended literature:						
Course language:						
Course assessment Total number of assessed students: 142						
	abs	n				
	41.55	58.45				

Provides: Mgr. Peter Bakalár, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
Course ID: ÚM MDM/14	IV/ Course na	Course name: Mathematics and didactics of mathematics				
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present						
Number of cree	dits: 1					
Recommended	semester/trimes	ster of the cours	e:			
Course level: II	-					
Prerequisities: GEO2c/10 and U ÚMV/DFR/10) (ÚMV/PSTb/10	Prerequisities: ÚMV/GEO2b/10 and ÚMV/DDMa/14 and ÚMV/DDMb/14 and ((ÚMV/GEO2c/10 and ÚMV/ATA/14) or (ÚMV/GEO2c/10 and ÚMV/PSTb/10) or (ÚMV/GEO2c/10 and ÚMV/DFR/10) or (ÚMV/ATA/14 and ÚMV/PSTb/10) or (ÚMV/ATA/14 and ÚMV/DFR/10) or (ÚMV/PSTb/10 and ÚMV/DFR/10))					
Conditions for Acquiring the r	course completi equired number o	on: of credits in the s	tructure defined	by the study plan	n.	
Learning outco Evaluation of st	omes: tudent's compete	ences with respec	t to the profile o	f the graduate.		
Brief outline of	the course:					
Recommended	literature:					
Course languag Slovak	ge:					
Course assessm Total number of	Course assessment Total number of assessed students: 55					
A	В	С	D	E	FX	
29.09	30.91	20.0	16.36	3.64	0.0	
Provides:	Provides:					
Date of last mo	Date of last modification: 27.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

, v						
University: P. J. Safá	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚFV/ MDT06/15	Course ID: ÚFV/ /DT06/15Course name: Modern Didactical Technology					
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the method: ce cse-load (hours): dy period: 28 esent					
Number of credits: 2						
Recommended seme	ster/trimester of the course: 2.					
Course level: II.						
Prerequisities:						
Conditions for cours All assignments must assessment criteria. Active participation a	e completion: be uploaded by a student and accepted by a teacher according to at the seminar with minimum 80% participation.					
Student graduated fro - recognise basic tool - to use all types of ac - to design and realise	m subject will be able: s for teaching activities, ctuall tools in education of science or humanities, e educational activities by using modern technologies.					
 Brief outline of the c 0. Introduction 1. Cloud services 2. Digital notebooks 3. Digital imaging 4. Digital image procession 5. Digital text procession 6. Digital audio procession 7. Digital video, procession 8. Google online serve 9. Interactive didaction 10. Computer based I 11. Digital teacher 12. Didigital teacher 	ourse: essing sing essing essing, videoconferencing rices eal system (whiteboard, e-voting system, tablet) aboratories ies and virtual experiments s workspace					
Recommended litera 1. Kireš, M. et al.: Me 788080861353 2. actuall information 3. catalogues of teach 3. actuall articles abo	ture: odern didactical technics in teacher practice, Košice: Elfa, 2010, ISBN from web sites related to didactical technologies, ning tools, ut modern trends in science and humanities education.					

Course language:

Slovak, Englisl	Slovak, English					
Course assessm Total number o	nent If assessed studen	ts: 44				
А	В	С	D	E	FX	
34.09	34.09 45.45 11.36 4.55 4.55 0.0					
Provides: doc.	Provides: doc. RNDr. Jozef Hanč, PhD.					
Date of last modification: 01.03.2018						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P I Šafá	University: P. I. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
Common Do ÚEV/	Commence Madam Dission from Didentics Daint of Minne				
MFDF/15	Course name: Modern Physics from Didactics Point of View				
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 1 Per study period: 28 / 14 Course method: present					
Number of credits: 3	3				
Recommended seme	ester/trimester of the course: 1.				
Course level: II.					
Prerequisities:					
Conditions for cours Active participation; project with a practic Exam and defending	se completion: completing reading assigments; realization of a chosen modern physics cal application. own project				
Learning outcomes: 1. Achieving better c ideas of contemprora have. Emphasis is no and tools of Physics employing only elem 2. Getting physical in physics.	onceptual understanding and getting an integrated view on fundamental ary modern physics, which every future physicist and physics teacher should of on abstract mathematical methods, but on using most recent knowledge Education Research - computer modeling of physical phenomena and mentary algebra and calculus. Intuition and experience dealing with practical applications of modern				
Brief outline of the o 1. Fundamental idea principle of least active 2. Fundamental idea momenergy, metrics, 3. Fundamental idea histories, rules for a diagrams; practical a	course: as of modern mechanics: symmetry, event, worldlline, spacetime diagram, on, conservation laws; practical applications. as of relativity: principle of relativity, space-time interval, conservation of principle of maximal aging; practical applications. s of quantum mechanics: probability amplitude, principle of democracy of implitudes, propagator, Schrödinger's equation, stationary state, Feynman's pplications.				
Recommended litera 1. Moore, T. A, Six I 2003 2. Feynman, R.P., QI Princeton, 1985 3. Hey, A., Walters, I 4. Taylor, E. F, Whee W.H. Freeman and C 5. Thorne, K. S., Bla 6. Relevant resources Journal of Physics, S	ature: deas That Shaped Physics - Unit C and Q, 2nd ed., Mc Graw Hill, Boston, ED - The Strange theory of Light and Matter, Princeton University Press, P., New Quantum Universe, Cambridge University Press, 2003 eler, J. A., Space-time Physics-Introduction to Special Relativity, 2nd ed., Company, New York, 1992 ck Holes and Time Warps, W.W. Norton, New York, 1995 s from recent journal literature (American Journal of Physics, European cientific American)				

Course language: Slovak					
Course assessment Total number of assessed students: 3					
А	В	С	D	E	FX
33.33	33.33	33.33	0.0	0.0	0.0
Provides: doc.]	Provides: doc. RNDr. Jozef Hanč, PhD.				
Date of last modification: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: KPE/ MPPa/15	ourse ID: KPE/ IPPa/15Course name: Supervised Teaching Practice				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present					
Number of credits: 2					
Recommended seme	ster/trimester of the cours	e: 1			
Course level: 11.					
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Course assessment Total number of asses	Course assessment Total number of assessed students: 692				
	abs	n			
99.86 0.14					
Provides: doc. PhDr. Beata Gajdošová, PhD., PaedDr. Renáta Orosová, PhD., Mgr. Katarína Petríková, PhD.					
Date of last modification: 05.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J. Šafárik University in Košice						
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: ÚFV/ MPPb/15	Course ID: ÚFV/ Course name: Scheduled practice teaching MPPb/15					
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present						
Number of credits: 1						
Recommended seme	ster/trimester of the cours	e: 2.				
Course level: II.						
Prerequisities: KPE/2	MPPa/15 and KPE/PDU/15	and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)				
Conditions for cours Student observes 11 I teacher trainer. Confi	e completion: physics lessons and leads on rmation of classroom visits.	e own physics lesson under the guidance of a Written assessment made by teacher trainer.				
Learning outcomes: Students acquire know the subject of physics first experience with	wledge by observing the prase and getting known about the teaching the subject of phys	ectical applications of teaching skills for teaching ne organization of school work. Studneets gain ics.				
Brief outline of the c Students observe the it with teacher trainer is scheduled once a v are obeservation/teac the teacher trainer.	Brief outline of the course: 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 observation/teaching, the third lesson - analysing the teaching process under the guidance of the teacher trainer.					
Recommended litera	iture:					
Course language: Slovak						
Course assessment Total number of asses	ssed students: 61					
	abs n					
	100.0	0.0				
Provides: doc. RNDr. Jozef Hanč, PhD.						
Date of last modification: 01.03.2018						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: ÚFV/ MPPc/15	Course name: Continuous	Practice Teaching I				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 4t Course method: present						
Number of credits: 2						
Recommended seme	ster/trimester of the cours	e: 3.				
Course level: II.						
Prerequisities: ÚFV/	MPPb/15					
Conditions for cours Confirmed list of sitt required extent of 6 le Lesson records and w	e completion: ings in on classes and teachi essons of sitting in on classe written preparation for the less	ng as a confirmation of attendance in the s and 18 physics lessons taught by student. ssons.				
Learning outcomes: Student gains under t Physics.	he guidance of teacher train	er practical teaching skills within the subject of				
Brief outline of the c Sitting in on classes, of observed and taug	ourse: teaching physics lessons by ht lessons.	student, consulted with teacher trainer, analysis				
Recommended litera Textbooks for lower a	ture: and upper secondary school	physics				
Course language: Slovak						
Course assessment Total number of asses	Course assessment Total number of assessed students: 12					
	abs	n				
100.0 0.0						
Provides: doc. RNDr. Jozef Hanč, PhD.						
Date of last modifica	Date of last modification: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science					
Course ID: ÚFV/ MPPd/15	Course name: Continuous	Practice Teaching II				
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 6t Course method: present					
Number of credits: 2						
Recommended seme	ster/trimester of the cours	e: 4.				
Course level: II.						
Prerequisities: ÚFV/	MPPc/15					
Conditions for cours Confirmed list of sitt required extent of 8 1 Lesson records and w	e completion: ings in on classes and teachi essons of sitting in on classe vritten preparation for the less	ng as a confirmation of attendance in the s and 30 physics lessons taught by student.				
Learning outcomes: Student gains under t Physics.	he guidance of teacher train	er practical teaching skills within the subject of				
Brief outline of the c Sitting in on classes, of observed and taug	ourse: teaching physics lessons by ht lessons.	student, consulted with teacher trainer, analysis				
Recommended litera Textbooks for lower	iture: and upper secondary school	physics				
Course language: Slovak						
Course assessment Total number of asse	ssed students: 8					
	abs	n				
100.0 0.0						
Provides: doc. RNDr. Jozef Hanč, PhD.						
Date of last modifica	tion: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
Course ID: ÚFV/ MSSU/15Course name: Physics and Didactics of Physics						
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present						
Number of credits: 1						
Recommended semester/trimester of the course:						
Course level: II.						
Prerequisities: (ÚFV/DF1a/15 and ÚFV/FKS/15 and ÚFV/SJF1/15 and ÚFV/DF1b/15 and ÚFV/ASFU/15)						
Conditions for course completion: 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.						
Learning outcomes: Competencies in accordance with the graduate profile.						
 Brief outline of the course: 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 						
Recommended literature:						
Course language: Slovak						
Course assessment Total number of assessed students: 8						
A B C D E FX						
75.0 25.0 0.0 0.0 0.0 0.0						
Provides:						
Date of last modification: 01.03.2018						

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP MT/09	Course ID: KPE/ MT/09 Course name: Class Management				
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of crea					
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	•				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Course assessm Total number of	ent f assessed studen	ts: 474			
А	В	С	D	E	FX
53.38	33.76	9.49	1.69	0.63	1.05
Provides: PaedDr. Renáta Orosová, PhD.					
Date of last mo	dification: 05.02	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Ol'ga C	Drosová,

University: P. J.	University: P. J. Šafárik University in Košice					
Faculty: Faculty	Faculty: Faculty of Science					
Course ID: KGH NJKG/07	Course ID: KGER/ Course name: Communicative Grammar in German Language NJKG/07 Value					
Course type, sco Course type: P Recommended Per week: 2 Pe Course method	ope and the met ractice course-load (h r study period: l: present	thod: ours): 28				
Number of cred	its: 2					
Recommended s	semester/trimes	ster of the cours	e:			
Course level: I.,	II					
Prerequisities:						
Conditions for a	course completi	on:				
Learning outcom	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	e:					
Course assessme Total number of	ent assessed studen	ts: 48				
A	В	С	D	Е	FX	
54.17	54.17 12.5 10.42 4.17 10.42 8.33					
Provides: PaedDr. Ingrid Puchalová, PhD., Mgr. Barbora Molokáčová						
Date of last mod	lification: 25.08	3.2017				
Approved: Guar CSc.Guaranteepr	canteeprof. RND	r. Peter Kollár, E Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,	

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID:Course name: Problem and Aggressive Behaviour of Pupils. Etiology, Prevention and Intervention.					
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28			
Number of crea	lits: 2				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II	-				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Course assessm Total number of	ent f assessed studen	ts: 24			
А	В	С	D	Е	FX
87.5	12.5	0.0	0.0	0.0	0.0
Provides: PhDr	. Anna Janovská,	PhD.			
Date of last modification: 21.08.2017					
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Ol'ga C	Drosová,

University: P. J	. Šafárik Univers	sity in Košice				
Faculty: Facult	y of Science					
Course ID: KP PDD/17	Course ID: KPE/ Course name: Pedagogical Diagnostics PDD/17					
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	ope and the me Practice d course-load (h er study period: d: present	thod: ours): : 28				
Number of cree	dits: 2					
Recommended	semester/trime	ster of the cours	se: 2.			
Course level: II	•					
Prerequisities:						
Conditions for	course complet	ion:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	ent f assessed studer	nts: 14				
А	В	С	D	Е	FX	
100.0	0.0	0.0	0.0	0.0	0.0	
Provides: Paed	Dr. Janka Ferenc	ová, PhD.				
Date of last mo	dification: 05.02	2.2018				
Approved: Gua CSc.Guaranteep	ranteeprof. RND	Dr. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteepi	of. PhDr. Ol'ga C	Drosová,	

University: P. J.	. Šafárik Univers	ity in Košice			
Faculty: Faculty	y of Science				
Course ID: KP PDK/17	E/ Course na	me: Pedagogica	l Communication	n	
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice I course-load (h er study period: d: present	thod: ours): 28			
Number of crea	lits: 2				
Recommended	semester/trimes	ster of the cours	e: 1.		
Course level: II					
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Course assessm Total number of	ent f assessed studen	ts: 26			
А	В	С	D	Е	FX
80.77	15.38	3.85	0.0	0.0	0.0
Provides: Mgr.	Katarína Petríko	vá, PhD.			
Date of last mo	dification: 05.02	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	r. Peter Kollár, E Doboš, CSc.	DrSc.Guaranteepi	of. PhDr. Ol'ga C	Drosová,

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP PDU/15	E/ Course na	ame: Teaching N	lethodology and	Pedagogy	
Course type, sc Course type: 1 Recommended Per week: 2/2 Course metho	cope and the met Lecture / Practice d course-load (h 2 Per study peri d: present	thod: ; ours): od: 28 / 28			
Number of crea	dits: 5				
Recommended	semester/trimes	ster of the cours	e: 1.		
Course level: II	-				
Prerequisities:					
Conditions for	course completi	ion:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Course assessm Total number of	nent f assessed studen	ıts: 1361			
А	В	С	D	Е	FX
11.83	25.2	27.48	19.99	8.52	6.98
Provides: Paed	Dr. Renáta Orosc	ová, PhD., Mgr. k	Katarína Petríkov	á, PhD.	
Date of last mo	dification: 05.02	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	Dr. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,

University: P. J	. Šafárik Univers	sity in Košice			
Faculty: Facult	y of Science				
Course ID: CJP/ Course name: Academic English PFAJAKA/07 Course name: Academic English					
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the me Practice d course-load (h er study period d: combined, pr	thod: nours): : 28 esent			
Number of crea	lits: 2				
Recommended	semester/trime	ster of the course	2.		
Course level: I.	, II., N				
Prerequisities:					
Conditions for Active classroo and 12th/13th v assessment of to 72-78%, E 65-7	course complet m participation, week), no retake. ests and presenta 11%, FX 64% an	ion: 2 absences tolerat Minipresentation tion. Grading sca d less	ted (4x45 min.) on chosen topic le: A 93-100%,	tolerated. 2 tests c. Final evaluatio B 86-92%, C 79-	(5th/6th week n- average ·85%, D
Learning outco	mes:				
Brief outline of	the course:				
Recommended Seal B.: Acader T. Armer :Caml M. McCarthy M Zemach, D.E, F Olsen, A. : Acti www.bbclearnin Cambridge Aca	Recommended literature: 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 www.bbclearningenglish.com				
Course language: English language, level B2 according to CEFR.					
Course assessment Total number of assessed students: 344					
А	В	C	D	E	FX
30.81 23.55 15.99 11.05 7.27 11.34					
Provides: Mgr. Zuzana Naďová					
Date of last mo	dification: 06.02	2.2018			
Approved: Gua CSc.Guaranteep	Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.				

University: P. J	University: P. J. Šafárik University in Košice				
Faculty: Faculty	Faculty: Faculty of Science				
Course ID: CJF PFAJGA/07	Course ID: CJP/ PFAJGA/07Course name: Communicative Grammar in English				
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: combined, present				
Number of crea	dits: 2				
Recommended	semester/trime	ster of the cours	e:		
Course level: I.	, II., N				
Prerequisities:					
Conditions for Active classroo week), no retak 86-92%, C 79-8	course complet m participation e. Final evaluati 85%, D 72-78%,	ion: (max. 2x90 min. a on- average asses E 65-71%, FX 64	bsences tolerated sment of tests. G 1% and less.	d). 2 test (5th/6th rading scale: A 9	h and 12/13th 93-100%, B
Learning outco	omes:				
Brief outline of	the course:				
Recommended Misztal M.: The McCarthy, O'De Alexander L.G. Jones I Comm Vince M.: Macr www.bbclearnin Gráf T., Peters	Recommended literature: Misztal M.: Thematic Vocabulary, Fragment, 1998 McCarthy, O'Dell: English Vocabulary in Use, 1994 Alexander L.G.: Longman English Grammar, Longman, 1988 Jones I Communicative Grammar Practice, CUP, 1992 Vince M.: Macmillan Grammar in Context, Macmillan, 2008 www.bbclearningenglish.com Gráf T. Peters S.: Time to practise. Polyglot, 2007				
Course languag	ge:				
Course assessme Total number of	ent f assessed studer	nts: 394			
А	В	С	D	E	FX
39.34	18.53	17.01	8.88	6.09	10.15
Provides: Mgr. Lenka Klimčáková					
Date of last mo	dification: 06.0	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RNI rof. RNDr. Joze	Dr. Peter Kollár, D f Doboš, CSc.	PrSc.Guaranteepr	of. PhDr. Ol'ga	Orosová,

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science						
Course ID: CJP/ Course name: Communicative Competence in English PFAJKKA/07						
Course type, scope a Course type: Practi Recommended cou Per week: 2 Per stu Course method: co	and the method: ce rse-load (hours): ady period: 28 mbined, present					
Number of credits: 2	2					
Recommended seme	ester/trimester of the course:					
Course level: I., II., I	N					
Prerequisities:						
Active participation two classes at the mo 2 credit tests (presum on selected topics. Final grade will be ca 65-71%, FX 64 % ar	in class and completed homework assignments. Students are allowed to miss ost. hably in weeks 6/7 and 12/13) and short academic presentations in English alculated as follows: A 93-100 %, B 86-92%, C 79-85%, D 72-78%, E					
Learning outcomes: Uplatnenie a aktívne situáciách. Zdokonal vecnej kompetencie, výpovede, efektívne výpovede. Precvičov oslovenie), informatí časových vzťahov), r a hodnotiacich (napr. budovania praktickej požiadavkám a kritér jazykov.	používanie svojich teoretických vedomostí v praktických komunikačných enie jazykových vedomostí a zručností študenta, rečovej, pragmatickej a predovšetkým zlepšujú komunikáciu, schopnosť prijímať a formulovať vyjadrovať svoje myšlienky ako aj orientovať sa v obsahovom pláne anie rečových intencií kontaktných (napr. pozdravy, oslovenia, pozvanie, vnych (napr. získavanie a podávanie informácií, vyjadrenie priestorových a regulačných (napr. prosba, poď akovanie, zákaz, pochvala, súhlas, nesúhlas) vyjadrenie vlastného názoru, stanoviska, želania, emócií). Výsledkom jazykovej kompetencie majú byť vedomosti a zručnosti zodpovedajúce riám dokumentu Spoločný európsky referenčný rámec pre vyučovanie					
Brief outline of the o Rodina, jej formy a p Vyjadrovanie pocitov Dom, bývanie a budu Formy a dialekty v a Život v meste a na vi	zourse: problémy v a dojmov úcnosť nglickom jazyku dieku					

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

Recommended literature:

www.bbclearningenglish.com

McCarthy M., O'Dell F.: English Vocabulary in Use, Upper-Intermediate. CUP, 1994. Misztal M.: Thematic Vocabulary. SPN, 1998.

Fictumova J., Ceccarelli J., Long T.: Angličtina, konverzace pro pokročilé. Barrister and Principal, 2008.

Peters S., Gráf T.: Time to practise. Polyglot, 2007.

Jones L.: Communicative Grammar Practice. CUP, 1985.

Alexander L.G.: Longman English Grammar. Longman, 1988.

Course language:

English language, B2 level according to CEFR

Course assessment

Total number of assessed students: 220

А	В	С	D	Е	FX
36.36	21.82	20.45	10.45	7.27	3.64

Provides: Mgr. Zuzana Naďová

Date of last modification: 06.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J.	. Šafárik Univers	ity in Košice					
Faculty: Faculty	y of Science						
Course ID: KP PPD/15	Course ID: KPE/ Course name: Pedagogy and Psychology PD/15 Course name: Pedagogy and Psychology						
Course type, sc Course type: Recommended Per week: Per Course metho	ope and the met d course-load (h r study period: d: present	thod: ours):					
Number of crea	lits: 1						
Recommended	semester/trimes	ster of the cours	e:				
Course level: II	•						
Prerequisities:	KPE/PDU/15 an	d KPPaPZ/PPgU	/15				
Conditions for	course completi	on:					
Learning outco	omes:						
Brief outline of	the course:						
Recommended	literature:			_			
Course languag	ge:						
Course assessm Total number of	ent f assessed studen	ts: 355					
А	В	С	D	Е	FX		
29.01	24.79	25.07	15.77	3.66	1.69		
Provides:							
Date of last mo	dification: 21.08	3.2017					
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef	r. Peter Kollár, E Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C	Drosová,		

University: P. J.	University: P. J. Šafárik University in Košice						
Faculty: Faculty	Faculty: Faculty of Science						
Course ID: Dek UPJŠ/PPZ/13	ourse ID: Dek. PFCourse name: Personality Development and Key Competences for SuccessOJŠ/PPZ/13on a Labour Market						
Course type, sc Course type: I Recommended Per week: Per Course metho	ope and the me Practice I course-load (h r study period: d: present	thod: t ours): 14s					
Number of crea	lits: 2						
Recommended	semester/trime	ster of the cours	e:				
Course level: II							
Prerequisities:							
Conditions for	course complet	ion:					
Learning outco	mes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Course assessm Total number of	Course assessment Total number of assessed students: 39						
А	В	С	D	Е	FX		
100.0	0.0	0.0 0.0 0.0 0.0 0.0					
Provides: RNDr. Peter Stefányi, PhD.							
Date of last modification: 19.02.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J. Šafárik University in Košice							
Faculty: Facult	Faculty: Faculty of Science						
Course ID: KPPaPZ/PPgU/	15 Course na	Course name: Psychology and Educational Psychology					
Course type, so Course type: 1 Recommende Per week: 2 / 2 Course metho	cope and the met Lecture / Practice d course-load (h 2 Per study peri d: present	thod: c ours): od: 28 / 28					
Number of cree	dits: 5						
Recommended	semester/trimes	ster of the cours	e: 1.				
Course level: I	[
Prerequisities:							
Conditions for	course completi	ion:					
Learning outco	omes:						
Brief outline of	the course:						
Recommended	literature:						
Course langua	ge:						
Course assessn Total number o	Course assessment Total number of assessed students: 1287						
А	В	С	D	Е	FX		
10.18	18.57	22.46	22.84	22.84	3.11		
Provides: prof. PhDr. Oľga Orosová, CSc., Mgr. Lucia Hricová, PhD., PhDr. Anna Janovská, PhD.							
Date of last modification: 21.08.2017							
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	Dr. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C	Drosová,		

University: P. J.	University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science								
Course ID: ÚFV PSP1a/05	Inse ID: ÚFV/ Course name: School Physical Experiments I Pla/05 Pla/05							
Course type, sco Course type: Pr Recommended Per week: 3 Per Course method	pe and the me ractice course-load (l r study period : present	ethod: hours): : 42						
Number of credi	its: 2							
Recommended s	emester/trime	ester of the cours	se: 1.					
Course level: II.								
Prerequisities:								
Conditions for c continuous writte being active in p final oral examin	ourse complet en tests ractises aation	ion:						
Learning outcom To gain basic ski belonging to the familiar with did educational proc	Learning outcomes: 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.							
Brief outline of t The practices are experiments from pupils. The emphysics ex-	Brief outline of the course: 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							
Recommended I 1.Kašpar,E.,Vach 2.Koubek, V. a k 3.http://physedu.	iterature: nek,J.: Pokusy ol.: Školské po science.upjs.sk	z fyziky na středr kusy z fyziky, SI x/sis/fyzika/exper	ních školách, I.di PN Bratislava, 19 imenty/index.hti	íl, SPN Praha,196 992 n	7			
Course language: Slovak								
Course assessment Total number of assessed students: 69								
A	В	С	D	Е	FX			
44.93	21.74	18.84	7.25	4.35	2.9			
Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.								
Date of last mod	ification: 01.0	3.2018						

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Š	University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science								
Course ID: ÚFV/ PSP1b/04	FV/ Course name: School Physical Experiments II							
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present								
Number of credit	s: 2							
Recommended se	mester/trimes	ster of the course	e: 2.					
Course level: II.								
Prerequisities:								
Conditions for co continuous written being active in pra final oral examina	urse completi n tests actises tion	on:						
Learning outcom Students should g techniques and ph of the subject mat	Learning outcomes: 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							
Brief outline of the course: 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.								
Recommended literature: 1.Onderová, Ľ., 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.http://physedu.science.upjs.sk/sis/fyzika/experimenty/index.htm								
Course language: Slovak								
Course assessment Total number of assessed students: 65								
A	A B C D E FX							
52.31	10.77	29.23	4.62	1.54	1.54			
Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., PaedDr. Iveta Štefančínová, Ph.D.								

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.
University: P. J.	Šafárik Univer	sity in Košice						
Faculty: Faculty	y of Science							
Course ID: ÚM PSTb/10	rse ID: ÚMV/ Course name: Probability and statistics II b/10							
Course type, sc Course type: I Recommended Per week: 2/2 Course metho	ope and the mo Lecture / Practic d course-load (1 2 Per study per d: present	ethod: e hours): iod: 28 / 28						
Number of crea	lits: 5							
Recommended	semester/trime	ester of the cours	e: 1.					
Course level: I.	, II.							
Prerequisities:								
Conditions for To obtain at lea tests and oral ex	course comple t st 50% in two w cam.	ion: ritten tests during	the semester. T	otal evaluation ba	sed on written			
Learning outco Student should theoretical know	mes: obtain the know vledge in practi	ledge about basic cal problems solvi	statistical mething.	ods and the ability	y to apply			
Brief outline of Random vecto Correlation and distributions an and their prop construction.Te searching optim	the course: rs, their distri d regression, p d characteristics perties. Maximus sting of statistic al critical regio	butions and cha roperties of corr Some important In likelihood m cal hypothesis, cr ns. Some importa	racteristics. Jo elation coeffici statistics and th ethod. Interval itical region, le nt parametric ar	int and margina ient. Random sar neir distributions. I l estimates, confi evel of significance and nonparametric t	l distributions. nple, sampling Point estimators idence interval e. Methods for tests.			
 searching optimal critical regions. Some important parametric and nonparametric tests. Recommended literature: Skřivánková V.: Pravdepodobnosť v príkladoch, UPJŠ, Košice, 2006 (in Slovak) Skřivánková VHančová M.: Štatistika v príkladoch, UPJŠ, Košice, 2005 (in Slovak) CASELLA, G., BERGER, R., Statistical Inference, 2nd ed., Duxbury Press, 2002 DeGroot, M. H., Schervish, M. J.: Probability and Statistics, 4th ed., Pearson, Boston, 2012 Utts, J.M., Heckard, R.F.: Mind od Statistics, 5th ed., Thomson Brooks/Cole, 2014 								
Course languag Slovak	ge:							
Course assessm Total number of	ent f assessed stude	nts: 175						
Α	A B C D E FX							
20.0	21.14	17.71	24.0	10.86	6.29			
Provides: RNDr. Martina Hančová, PhD.								
Date of last mo	dification: 26.0	9.2017						

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univers	sity in Košice						
Faculty: Facult	y of Science							
Course ID: KPPaPZ/PTPN/	Course ID:Course name: Psychology of Creativity and Working with Gifted StudentsKPPaPZ/PTPN/17in Teacher Practice							
Course type, so Course type: 1 Recommended Per week: 2 P Course metho	ope and the me Practice d course-load (h er study period d: present	thod: nours): : 28						
Number of cree	dits: 2							
Recommended	semester/trime	ster of the cours	e: 2.	_				
Course level: I	- -							
Prerequisities:								
Conditions for	course complet	ion:						
Learning outco	mes:							
Brief outline of	the course:							
Recommended	literature:							
Course langua	ge:							
Course assessn Total number o	ent f assessed studer	nts: 18						
А	В	С	D	Е	FX			
100.0	0.0	0.0	0.0	0.0	0.0			
Provides: Mgr.	Lucia Hricová, l	PhD.						
Date of last mo	dification: 21.0	8.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RNI rof. RNDr. Joze	Dr. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Ol'ga (Drosová,			

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science							
Course ID: KPPaPZ/PUDU	U/15 Course na	5 Course name: Drug Addiction Prevention in Educational Practice						
Course type, so Course type: Recommende Per week: 2 / Course metho	cope and the met Lecture / Practice d course-load (h 1 Per study perio d: present	thod: ; ours): od: 28 / 14						
Number of cre	dits: 4							
Recommended	semester/trimes	ster of the cours	e: 1., 3.					
Course level: I	Ι.							
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	omes:							
Brief outline of	f the course:							
Recommended	literature:							
Course langua	ge:							
Course assessm Total number o	nent f assessed studen	ts: 257						
А	В	С	D	Е	FX			
48.25	43.19	7.78	0.78	0.0	0.0			
Provides: prof.	PhDr. Ol'ga Oros	sová, CSc., Mgr.	Marta Dobrowol	ska Kulanová, Pl	hD.			
Date of last mo	odification: 21.08	3.2017						
Approved: Gua CSc.Guaranteep	aranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, E Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,			

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science							
Course ID: KPPaPZ/PsZ/15	Course ID: Course name: Psychology of Health CPPaPZ/PsZ/15 Course name: Psychology of Health							
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28						
Number of crea	dits: 2							
Recommended	semester/trimes	ster of the cours	e: 3.					
Course level: II	•							
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	mes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Course assessm Total number of	ent f assessed studen	ts: 61						
А	В	С	D	Е	FX			
100.0	0.0	0.0	0.0	0.0	0.0			
Provides: Mgr.	Jozef Benka, Ph	D. et PhD.						
Date of last mo	dification: 21.08	3.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,			

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science							
Course ID: KP SDaM/15	Course ID: KPO/ Course name: Child and Adolescent Sociology SDaM/15							
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	cope and the met Lecture d course-load (h er study period: d: present	thod: ours): 28						
Number of cree	dits: 2							
Recommended	semester/trimes	ster of the cours	e: 3.					
Course level: II								
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	omes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Course assessm Total number o	nent f assessed studen	ts: 844						
А	В	С	D	Е	FX			
50.0	29.74	15.28	3.32	1.3	0.36			
Provides: Mgr.	Alexander Onufi	rák, PhD.						
Date of last mo	dification: 28.08	3.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	or. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepi	rof. PhDr. Ol'ga (Drosová,			

University: P. J. Šafárik University in Košice								
Faculty: Faculty	Faculty: Faculty of Science							
Course ID: ÚM SHM/10	MV/ Course name: Seminar on history of mathematics							
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present								
Number of credi	its: 2							
Recommended s	semester/trimes	ster of the cours	e: 2.					
Course level: I.,	II.							
Prerequisities:								
Conditions for course completion: 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.								
Learning outcome Students get an of and selected term thinking.	nes: overview of the ns and about par	history of the devallel between ph	velopment of cer ylogenesis and o	tain mathematicant of ma	al disciplines			
Brief outline of t Mathematics in (Arabia, China, Beginning of Mo	t he course: Early Civilizati India). Medieva odern Mathemat	ons. Greek Matl Il European Mat ics.	nematics. Mather hematics. The Ro	matics in the Ne enaissance of Ma	ar and Far East athematics. The			
Recommended literature: 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) Znám,Š. a kol.: Pohľad do dejín matematiky. Alfa, Bratislava, 1986 (in slovak) Konforovič, A.G.: Významné matematické úlohy, SPN Praha, 1989 (in slovak)								
Course language: Slovak								
Course assessme Total number of	ent assessed studen	ts: 144						
A	В	С	D	Е	FX			
80.56	6.94	6.94	2.78	2.78	0.0			

Provides: RNDr. Ingrid Semanišinová, PhD.

Date of last modification: 27.02.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J	. Šafárik Univer	sity in Košice					
Faculty: Facult	y of Science						
Course ID: ÚF SJF1/15	urse ID: ÚFV/ Course name: Subnuclear Physics F1/15						
Course type, so Course type: Recommende Per week: 2 P Course metho	ope and the mo Lecture d course-load (er study period d: present	ethod: hours): l: 28					
Number of cre	dits: 2						
Recommended	semester/trim	ester of the cours	e: 2.				
Course level: I	•						
Prerequisities:							
Conditions for written test and exam	course comple thesis	tion:					
Learning outco Preview of basis theoretical desc	mes: c characteristics ription and exp	s and classification erimental techniqu	n of elementary ie.	particles, their stru	uctures,		
Brief outline of Historical intro particlesClass	the course: duction to the pification of parti	particle physics. T cles. Symmetrics	The forces in na and conservatio	ature. Elementary n laws. Standard 1	and composite model.		
Recommended 1. Close F.: The 2. Hajko V. and 3. Kapitonov I. 4. Brandt S., Th 2009.	literature: e Cosmic Onion team of author M., Vvedenije v ne harvest of a c	- Quarks and the s, Physics in exper fiziku jadra i cha entury, Discoverie	Nature of the U riments, Bratisla stic (Russian), N es of modern ph	niverse, Oxford, 1 ava, 1997. Moscow, 2004. ysics in 100 episo	990. des, Oxford,		
Course langua Slovak	ge:						
Course assessn Total number o	nent f assessed stude	nts: 32					
А	В	C	D	Е	FX		
31.25	3.13	6.25	25.0	25.0	9.38		
Provides: prof.	RNDr. Stanisla	v Vokál, DrSc.		•			
Date of last mo	dification: 22.0	2.2018					
Approved: Gua CSc.Guaranteer	ranteeprof. RN prof. RNDr. Joze	Dr. Peter Kollár, D ef Doboš, CSc.	DrSc.Guaranteep	orof. PhDr. Oľga C	Drosová,		

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science							
Course ID: KPPaPZ/SNP/0	Course ID: Course name: Mobbing, Violence and Their Prevention CPPaPZ/SNP/09							
Course type, sc Course type: 1 Recommended Per week: 2 P Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28						
Number of cree	dits: 2							
Recommended	semester/trimes	ster of the cours	e: 1., 3.					
Course level: II	- -							
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	omes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Course assessm Total number o	nent f assessed studen	ts: 109						
А	В	С	D	Е	FX			
77.06	20.18	1.83	0.92	0.0	0.0			
Provides: Mgr.	Mária Bačíková,	PhD.						
Date of last mo	dification: 21.08	3.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C	Drosová,			

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚN SSM/15	ourse ID: ÚMV/ Course name: Seminar on school mathematics SM/15 SM/15						
Course type, so Course type: Recommende Per week: 2 P Course metho	cope and the me Practice d course-load (H er study period od: present	thod: nours): : 28					
Number of cre	dits: 2						
Recommended	semester/trime	ster of the cours	e: 2.				
Course level: I	I.						
Prerequisities:							
Conditions for During the sem Evaluation A - evaluation D at granted to a stu Learning outco	Conditions for course completion: 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. Learning outcomes:						
specific problem	ms of teaching m	athematics at prin	nary and second	lary schools.	egies and with		
Brief outline of Basic knowled	f the course: ge of school mat	hematics. Number	r theory tasks, ta	asks to optimize, v	vord problems.		
Recommended Hecht, T., Skle Hecht, T. a kol. Bratislava 1999 Krantz, S.G., T Larson, L.C., N	l literature: náriková, Z., Me ., Matematika pro 9-2002. echniques of Pro Aetódy riešenia n	tódy riešenia mate e 14. ročník gym blem Solving, AM natematických pro	ematických úloh mázií a SOŠ, Or MS, 1997. oblémov, Bratisl	n, Bratislava, SPN rbisPictusIstropoli lava, Alfa, 1990.	, 1992. tana,		
Course langua Slovak	ge:						
Course assessm Total number o	nent f assessed studer	nts: 122					
А	В	C	D	E	FX		
45.08	23.77	10.66	9.84	10.66	0.0		
Provides: doc.	Provides: doc. RNDr. Matúš Harminc, CSc.						
Date of last mo	Date of last modification: 27.02.2018						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P I Šafárik University in Košice								
University: P. J. Salarik University in Kosice								
Faculty: Facult	y of Science							
Course ID: ÚM SVK/10	IV/ Course n	Course name: Students scientific conference						
Course type, so	ope and the me	thod:						
Course type:								
Recommende	d course-load (h	iours):						
Per week: Pe	r study period:							
Course metho	a: present							
Number of cre	dits: 4							
Recommended	semester/trime	ster of the cours	e:					
Course level: I.	, II.							
Prerequisities:								
Conditions for	course complet	ion:						
Learning outco Individual scien public presenta	omes: ntific work of stu tion.	idents. Publishing	g of obtained resu	alts in a written f	form and as a			
Brief outline of	the course:							
Recommended With respect to	literature: the research pro	blematics (article	in journals, boo	ks).				
Course languages Slovak or Engli	ge: ish							
Course assessn Total number o	nent f assessed studer	nts: 86						
А	В	C	D	Е	FX			
98.84	1.16	0.0	0.0	0.0	0.0			
Provides: prof.	Provides: prof. RNDr. Tomáš Madaras, PhD.							
Date of last modification: 27.02.2018								
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.								

University: P. J. Šafárik University in Košice								
Faculty: Faculty of Science								
Course ID: ÚF SVKD/04	V/ Course na	V/ Course name: Student Scientific Conference						
Course type, sc Course type: Recommended Per week: Per Course metho	ope and the me d course-load (h r study period: d: present	thod: ours):						
Number of crea	lits: 4							
Recommended	semester/trimes	ster of the cours	e:					
Course level: II	- -							
Prerequisities:								
Conditions for presentation of	course completi results of studne	on: ts´ research work	at Students' sci	entific conference	e			
Learning outco Student gains ex	mes: xperience and sk	ills in processing	and presentation	n of results of his	research work.			
Brief outline of Presentation of	the course: results of studne	ts' research work	at Students' sci	entific conference	e.			
Recommended Based on the re	literature: commendations	of supervisor						
Course languag Slovak	ge:							
Course assessm Total number of	ent f assessed studen	ıts: 45						
А	В	С	D	E	FX			
100.0	0.0	0.0	0.0	0.0	0.0			
Provides:								
Date of last modification: 01.03.2018								
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozet	Dr. Peter Kollár, D f Doboš, CSc.	orSc.Guaranteep	rof. PhDr. Ol'ga (Drosová,			

University: P. J. Šafárik University in Košice							
Faculty: Faculty	Faculty: Faculty of Science						
Course ID: ÚF TRS/15	V/ Course n	ame: Special The	ory of Relativity	T			
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present							
Number of crea	lits: 2						
Recommended	semester/trime	ster of the cours	e: 3.				
Course level: II	•						
Prerequisities:							
Conditions for	course complet	ion:					
Learning outco To acquaint stu	mes: dents with princ	iples of a special	theory of relativi	ty.			
Galilean transf experiment. Eir physical conseq apparatus of spe	formations and astein's principle uences. Interval ecial relativity. F	Galilean princip s of the special th and light cone. Pr Relativistic electro	le of relativity. neory of relativity oper time. Minko odynamics. Relat	Ether's hypothe y. Lorentz transfo wski's space-tim ivistic mechanics	esis. Michelson ormation and its e. Mathematical s.		
Recommended 1. Greiner W.: C 2004. 2. Goldstein H., 3. Landau L.D.,	literature: Classical Mechan Poole Ch., Safk Lifšic E.M.: Th	nics-Point Particle to J.: Classical M ne Classical Theor	es and Relativity echanics, Addiso ry of Fields, Perg	, Springer-Verlag on Wesley, San Fi gamon Press, Oxf	g, New York, rancisco, 2002. ford, 1975.		
Course languag Slovak	ge:						
Course assessm Total number of	ent f assessed studer	nts: 42					
А	В	C	D	Е	FX		
33.33	40.48	9.52	9.52	7.14	0.0		
Provides: prof.	RNDr. Andrej B	Bobák, DrSc.					
Date of last modification: 23.02.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.							

University: P. J	. Šafárik Univers	sity in Košice				
Faculty: Facult	y of Science					
Course ID: KPE/ TTUP/15Course name: Creating Text Teaching Aids						
Course type, so Course type: 1 Recommended Per week: 2 P Course metho	ope and the me Practice d course-load (h er study period: d: present	thod: ours): 28				
Number of cree	dits: 2					
Recommended	semester/trime	ster of the cours	e: 2.			
Course level: I	-					
Prerequisities:						
Conditions for	course completi	ion:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number o	nent f assessed studen	its: 129				
А	В	С	D	Е	FX	
51.94	31.01	10.85	4.65	1.55	0.0	
Provides: Mgr.	Katarína Petríko	vá, PhD., PaedD	r. Renáta Orosov	á, PhD.		
Date of last mo	dification: 05.02	2.2018				
Approved: Gua CSc.Guaranteer	ranteeprof. RND prof. RNDr. Jozet	Dr. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteepi	of. PhDr. Ol'ga C	Drosová,	

University: P. J. Šafárik University in Košice											
Faculty: Faculty of Science											
Course ID: TVa/11	D: ÚTVŠ/ Course name: Sports Activities I.										
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present											
Number of	Number of credits: 2										
Recommen	ded semeste	er/trimester	of the cours	e: 1.							
Course leve	e l: I., I.II., II										
Prerequisit	ies:										
Conditions Conditions Min. 80% c	for course of for course of active part	completion: ompletion: ticipation in c	elasses.								
Learning ou Increasing p relationship Brief outlin Brief outlin	Learning outcomes: Increasing physical condition and performance within individual sports. Strengthening the relationship of students to the selected sports activity and its continual improvement. Brief outline of the course: Brief outline of the course:										
Within the University floorball, ye tennis, spor In the first and particul physical co Last but not means of a In addition	Within the optional subject, the Institute of Physical Education and Sports of Pavol Jozef Šafárik University provides for students the following sports activities: aerobics, basketball, badminton, floorball, yoga, pilates, swimming, body-building, indoor football, self-defence and karate, table tennis, sports for unfit persons, streetball, tennis, and volleyball. 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										
the premise	s of the facul	ty or Univers	sity or compe	etitions with r	national or inf	ernational pa	articipation.				
Recommen	ded literatu	re:									
Course lang	guage:										
Course asse Total numb	essment er of assesse	ed students [.] 1	1672								
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs				
88.42	0.01	0.0	0.0	0.0	0.03	7.59	3.96				

Provides: Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Ing. Iveta Cimboláková, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

	P. J. Šafárik	University in	n Košice						
Faculty: Faculty of Science									
Course ID: ÚTVŠ/ Course name: Sports Activities II. TVb/11									
Course type Course type Recomment Per week: Course met	e, scope and pe: Practice nded course 2 Per study ethod: prese	the method -load (hours period: 28 nt	: 3):						
Number of	credits: 2								
Recommen	ded semeste	er/trimester	of the cours	e: 2.					
Course leve	el: I., I.II., II								
Prerequisit	ies:								
Conditions Conditions Final assess	for course of for course constant and ac	completion: completion: tive participa	ation in class	es - min. 75%	/0				
Learning of Learning of Increasing J relationship	utcomes: utcomes: physical con o of students	dition and pe to the selecte	rformance w ed sports acti	vithin individ vity and its c	ual sports. S continual imp	trengthening provement.	; the		
Brief outlin Brief outlin Within the University floorball, y tennis, spor	te of the course optional sub provides for oga, pilates, ts for unfit r	rse: ject, the Institution students the swimming, 1	itute of Phys following s body-buildin	ical Educatio ports activiti g, indoor foo	on and Sport es: aerobics, otball, self-d	s of Pavol Jo , basketball, efence and k	ozef Šafárik badminton,		
In the first and particul physical co Last but no means of a In addition physical edu the premise	two semester larities of incondition, coo t least, the in special prog to these spe ucation train s of the facul	ersons, street rs of the firs lividual sport rdination abi nportant role ram of medic orts, the Inst ings with an a ty or Univers	tball, tennis, t level of edu s, motor skill lities, physic of sports act cal physical e itute offers f attractive pro-	and volleyba ucation stude ls, game activ cal performan ivities is to e education to i for those who gram and org titions with n	all. ents will mas vities, they w ince, and mor liminate swi influence and o are interes anises variou ational or int	ster basic cha ill improve le tor performa mming illite d mitigate un ted winter a us competitic ternational pa	carate, table aracteristics evel of their ince fitness. racy and by affitness. and summer ons, either at articipation.		
In the first and particul physical co Last but no means of a In addition physical edu the premise Recommen	two semester larities of incondition, coo t least, the in special prog to these spe ucation train s of the facul ded literatu	rersons, street rs of the firs lividual sport rdination abi nportant role ram of medic orts, the Inst ings with an a ty or Univers re:	tball, tennis, t level of edu s, motor skill lities, physic of sports act cal physical e itute offers f attractive pro-	and volleyba ucation stude ls, game activ cal performan ivities is to e education to i for those who gram and org titions with n	all. ents will mass vities, they we have, and more iliminate swi influence and o are interess anises various ational or interest	ster basic cha ill improve le tor performa mming illite d mitigate un ted winter a us competitional pa	carate, table aracteristics evel of their ince fitness. racy and by affitness. and summer ons, either at articipation.		
In the first and particul physical co Last but no means of a In addition physical edu the premise Recommen Course lang	two semester larities of incondition, coo t least, the in special prog to these spe ucation train s of the facul ded literatu guage:	rersons, street rs of the firs lividual sport rdination abi nportant role ram of medic orts, the Inst ings with an a ty or Univers re:	tball, tennis, t level of edu s, motor skill lities, physic of sports act cal physical e itute offers f attractive pro-	and volleyba ucation stude ls, game activ cal performan ivities is to e education to i for those who gram and org titions with n	all. ents will mas vities, they w ince, and more liminate swi influence and o are interest anises various ational or int	ster basic cha ill improve le tor performa mming illite d mitigate un ted winter a us competitional pa	carate, table aracteristics evel of their ince fitness. racy and by ifitness. and summer ons, either at articipation.		
In the first and particul physical co Last but no means of a In addition physical edu the premise Recommen Course lang Course asse Total numb	two semester larities of incondition, coo t least, the in special prog to these spe ucation train s of the facul ded literatu guage: essment er of assesse	ersons, street rs of the firs lividual sport rdination abi nportant role ram of medic orts, the Inst ings with an a ty or Univers re:	tball, tennis, t level of edu s, motor skill lities, physic of sports act cal physical e itute offers f attractive pro- ity or compe	and volleyba ucation stude ls, game activ cal performan ivities is to e education to i for those who gram and org titions with n	all. ents will mas vities, they w ince, and mor liminate swi influence and o are interes anises variou lational or int	ster basic cha ill improve la tor performa mming illite d mitigate un ted winter a us competitic ternational pa	carate, table aracteristics evel of their ince fitness. racy and by affitness. and summer ons, either at articipation.		
In the first and particul physical co Last but no means of a In addition physical edu the premise Recommen Course lang Course asso Total numb abs	two semester larities of inc ndition, coo t least, the in special prog to these spe ucation train s of the facul ded literatu guage: essment er of assesse abs-A	ersons, street rs of the firs lividual sport rdination abi nportant role ram of medic orts, the Inst ings with an a ty or Univers re: ed students: 1 abs-B	tball, tennis, t level of edu s, motor skill lities, physic of sports act cal physical e itute offers f attractive pro- ity or compe 0971 abs-C	and volleyba ucation stude ls, game activ cal performan ivities is to e education to i for those who gram and org titions with n	all. ents will mas vities, they w ince, and mor liminate swi influence and o are interes anises variou ational or int abs-E	ster basic cha ill improve la tor performa mming illite d mitigate un ted winter a us competition ternational pa	aracteristics evel of their ince fitness. racy and by ifitness. and summer ons, either at articipation.		

Provides: Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Marcel Čurgali, Ing. Iveta Cimboláková, PhD.

Date of last modification: 18.08.2017

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafárik University in Košice								
Faculty: Fa	Faculty: Faculty of Science							
Course ID: TVc/11	Course ID: ÚTVŠ/ Course name: Sports Activities III.							
Course typ Course ty Recomme Per week: Course m	e, scope an pe: Practic nded cour 2 Per stud ethod: pres	nd the method e se-load (hours ly period: 28 sent	: 5):					
Number of	credits: 2							
Recommen	ded semes	ter/trimester	of the cours	se: 3.				
Course leve	el: I., I.II.,	II.						
Prerequisit	ies:							
Conditions	for course	e completion:						
Learning o	utcomes:							
Brief outlin	e of the co	ourse:						
Recommen	ded litera	ture:						
Course lan	guage:							
Course ass Total numb	essment er of asses	sed students: 6	910					
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs	
89.84	0.04	0.0	0.0	0.0	0.03	4.23	5.86	
Provides: Mgr. Marcel Čurgali, Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Ing. Iveta Cimboláková, PhD.								
Date of last modification: 18.08.2017								
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.								

University: P. J. Šafárik University in Košice								
Faculty: Fa	Faculty: Faculty of Science							
Course ID: TVd/11	Course ID: ÚTVŠ/ Course name: Sports Activities IV. rVd/11							
Course typ Course tyj Recomme Per week: Course me	e, scope an pe: Practic nded cour 2 Per stud ethod: pre	nd the method se se-load (hours dy period: 28 sent	l: s):					
Number of	credits: 2							
Recommen	ded semes	ster/trimester	of the cours	se: 4.				
Course leve	el: I., I.II.,	II.						
Prerequisit	ies:							
Conditions	for cours	e completion:						
Learning o	utcomes:							
Brief outlin	e of the co	ourse:						
Recommen	ded litera	ture:						
Course lan	guage:							
Course ass Total numb	essment er of asses	sed students: 5	045					
abs	abs-A	abs-B	abs-C	abs-D	abs-E	n	neabs	
85.09	0.3	0.04	0.0	0.0	0.0	6.82	7.75	
Provides: Mgr. Marcel Čurgali, Mgr. Peter Bakalár, PhD., Mgr. Dana Dračková, PhD., Mgr. Agata Horbacz, PhD., Mgr. Dávid Kaško, Mgr. Zuzana Küchelová, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Marek Valanský, prof. RNDr. Stanislav Vokál, DrSc., Ing. Iveta Cimboláková, PhD.								
Date of last modification: 18.08.2017								
Approved: CSc.Guarar	Guarantee teeprof. R	prof. RNDr. Pe NDr. Jozef Do	eter Kollár, I boš, CSc.	DrSc.Guarant	teeprof. PhD	r. Oľga Oros	ová,	

University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	y of Science					
Course ID: KPPaPZ/UPN/17Course name: Introduction into Psychology of Religion						
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28				
Number of crea	dits: 2					
Recommended	semester/trimes	ster of the cours	e: 2.			
Course level: II	•					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	ent f assessed studen	ts: 5				
А	В	С	D	Е	FX	
100.0	0.0	0.0	0.0	0.0	0.0	
Provides: Mgr.	Jozef Benka, Phl	D. et PhD.				
Date of last mo	dification: 21.08	3.2017				
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Ol'ga C	Drosová,	

University: P. J	. Šafárik Univers	ity in Košice						
Faculty: Facult	y of Science							
Course ID: KPPaPZ/UPR/1	Course ID: Course name: The Art of Aiding by Verbal Exchange KPPaPZ/UPR/15							
Course type, sc Course type: I Recommended Per week: 2 Pe Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28						
Number of crea	dits: 2							
Recommended	semester/trimes	ster of the cours	e: 2.					
Course level: II								
Prerequisities:								
Conditions for	course completi	on:						
Learning outco	omes:							
Brief outline of	the course:							
Recommended	literature:							
Course languag	ge:							
Course assessm Total number of	ent f assessed studen	ts: 84						
А	В	С	D	Е	FX			
90.48	2.38	4.76	1.19	1.19	0.0			
Provides: Mgr.	Ondrej Kalina, P	hD.						
Date of last mo	dification: 21.08	3.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C)rosová,			

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚFV/ VBF2/15	Course name: General Biophysics II						
Course type, scope a Course type: Lectur Recommended cou Per week: 3 Per stu Course method: pre	nd the method: re rse-load (hours): idy period: 42 esent						
Number of credits: 3							
Recommended semester/trimester of the course: 1., 3.							
Course level: II.							
Prerequisities:							
Conditions for cours Exam	se completion:						
Learning outcomes: To provide information main emphasis will be function of the most well as on the thermost	on about the object, significance and role of biophysics in science. The be given on the understanding of the principles determining the structure and important biological structures (nucleis acids, proteins, biomembranes) as odynamics and kinetics of selected chemical and biophysical processes.						
Brief outline of the c The definition of bio in biological systems	ourse: ophysics and its role in the science. Intra- and inter-molecular interactions s. 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 intractions, cooperativity of the binding

potential, binding constants of the ligand-macromolecule intractions, 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.

Recommended literature:

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.									
Course languag Slovak	ge:								
Course assessment Total number of assessed students: 9									
А	В	С	D	Е	FX				
22.22	44.44	11.11	11.11	11.11	0.0				
Provides: doc. 1	Mgr. Daniel Janc	ura, PhD.							
Date of last mo	dification: 01.03	3.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.									

University: P. J.	Šafárik Univer	sity in Košice					
Faculty: Faculty	of Science						
Course ID: ÚM VMA/10	V/ Course name: Selected topics on mathematical analysis						
Course type, sc Course type: I Recommended Per week: 2 / 1 Course method	ope and the mo ecture / Practic l course-load (1 Per study per l: present	ethod: e hours): iod: 28 / 14					
Number of cred	lits: 3						
Recommended	semester/trime	ester of the cours	e: 2.				
Course level: II							
Prerequisities:							
Conditions for Final evaluation	course complet is given by con	t ion: ntinuous assessme	ent.				
Learning outco Extend knowled	mes: lge of improper	integrals,properti	es of integrals c	lependent on a par	ameter, TBA		
Brief outline of 1. Improper Rie 2. Riemann inter integral (continu 3. TBA	the course: mann integral: grals dependent uity, integrabilit	definition, compu on a parameter: b y, differentiability	tation, existence asic properties o).	e criterions. of proper and impr	oper parametric		
Recommended I. Kluvánek, L. 2. J.C. Bowman 3. S. Lang, Und	literature: Mišík, M. Švec , Honours Calc egraduate Anal	, Matematika II; S ulus, Math.117/11 ysis, Springer, 199	SVTL, Bratislav 8, University o 97.	ra, 1959. f A. Edmond, Can	ada, 2010.		
Course languag Slovak	e:						
Course assessm Total number of	ent `assessed stude	nts: 57					
А	В	C	D	Е	FX		
17.54	5.26	29.82	17.54	24.56	5.26		
Provides: Mgr	lozef Kiseľák, l	PhD., doc. RNDr.	Ondrej Hutník,	PhD.			
Date of last mo	dification: 27.0	2.2018					
Approved: Gua CSc.Guaranteep	ranteeprof. RNI rof. RNDr. Joze	Dr. Peter Kollár, E f Doboš, CSc.	DrSc.Guaranteep	prof. PhDr. Ol'ga O	Drosová,		

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ VMV1/15	Course name: Using Multimedia in Education
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 14 esent
Number of credits: 3	
Recommended seme	ster/trimester of the course: 3.
Course level: II.	
Prerequisities:	
Conditions for cours 9. moduls assignmen presentation and disc A 100-90 B 89-80 C	e completion: ts: 45 points ussion about the project 55 points 79-70 D 69-60 E 59-50 F 49-0
Learning outcomes: Studenat will have ov	verview and skills in field of using multimedia in education.
Brief outline of the c 1. Computer graphics 2. Preparation and us 3. Computer animation 4. Digital audio and ed 5. Educational video 6. Interactive multim 7. Videotechnologies 8. Computer based so 9. Interactove acitvite 10. Educational project 11. Educational project 12. Project presentation	ourse: as visualisation tools ing of graphic elements on educational activities edia in education chool laboratory es in multimedia classroom ect creation on
Recommended litera 1. Kireš, M, Šnajden Bratislava 2002, 96 s 2. Kireš, M. a kol.: IH strán, 400 ks, ISBN 8 3. Šnajder, Ľ., Kireš, Bratislava, 2005, 48 s mutácia: ISBN 80-10	 ture: ¹ Ľ., Kalakay, R.: Multimédiá pre učiteľa, Asociácia projektu Infovek, UIPŠ trán, 400 ks, ISBN 80-7098-317-5 ¹ KT pre učiteľa fyziky, Asociácia projektu Infovek, UIPŠ Bratislava 2002, 79 ¹ 0-7098-316-7 ¹ M.: Práca s multimédiami pre stredné školy, tematický zošit, SPN strán, 1. vydanie: ISBN 80-10-00422-7, 2006, 1.vydanie maďarská jazyková ¹ -01031-6, 2007, 2.vydanie: ISBN 978-80-10-01224-4
Course language: Slovak, English	

Course assessment

Total number of assessed students: 0									
А	В	С	D	E	FX				
0.0	0.0	0.0	0.0	0.0	0.0				
Provides: doc. RNDr. Marián Kireš, PhD.									
Date of last mo	dification: 01.03	.2018							
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.									

University: P. J	. Šafárik Univers	ity in Košice					
Faculty: Facult	y of Science						
Course ID: KPPaPZ/VP/09	rse ID: Course name: Educational Counselling						
Course type, sc Course type: 1 Recommended Per week: 2 P Course metho	ope and the met Practice d course-load (h er study period: d: present	thod: ours): 28					
Number of cree	dits: 2						
Recommended	semester/trimes	ster of the cours	se: 2.	_			
Course level: II	- -						
Prerequisities:							
Conditions for	course completi	on:					
Learning outco	omes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Course assessm Total number o	nent f assessed studen	ts: 133					
А	A B C D E FX						
60.15	24.81	9.02	4.51	1.5	0.0		
Provides: PhDr	. Anna Janovská,	PhD.		_			
Date of last mo	dification: 21.08	3.2017					
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,		

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: ÚFV/ VPF1/15	Course name: Selected General Physics Problems I				
Course type, scope a Course type: Lectur Recommended cou Per week: 3 Per stu Course method: pre	and the method: re rse-load (hours): ady period: 42 esent				
Number of credits: 3	3				
Recommended seme	ester/trimester of the course: 2.				
Course level: II.					
Prerequisities:					
1. writing exam 20 p 2. writing exam 20 p self examples 30 bod semestral presentatio A 100-90 B 89-80 C	e completion: oints oints lov n 30 bodov 79-70 D 69-60 E 59-50 F 49-0				
Learning outcomes: Physics interpretation problems.	of of everyday phenomena can help with deeper understanding of physics				
Brief outline of the c 1. Kinematics and dy 2. Hydrostatics and h 3. Surface properties 4. Thermics and There 5. Thermics and There 6. Electrostatics 7. Electric field 8. Magnetic field 9. Mechanical oscilla 10. Acoustics 11. Ray Optics 12. Wave Optics 13. Student assignment	rourse: namics nydrodynamics of liquids rmodynamics rmodynamics II ntions, resonance, waves				
Recommended litera 1.Nahodil, J.: Fyzika 2.Tulčinskyj, : Zbierl 3.Kašpar, E. : Probléz 4.Feynman, R.P. : Fe 5.Landau, Kitajgorod 6.Lange, V.: To chce 7.http://kekule.sciend	v bežnom živote, Prometheus, Praha, 1996 ka kvalitatívnych úloh z fyziky, SPN, Bratislava, 1990 mové vyučovanie a problémové úlohy, SPN, Praha1982 ynmanove prednášky z fyziky 1-5, Alfa, 1985 lskij : Fyzika pre každého, Alfa 1972 vtip!, Alfa, Bratislava, 1988 ce.upjs.sk/fyzika				

8.http://physed	u.science.upjs.sk				
Course langua Slovak, Englisl	ge: 1				
Course assessn Total number o	nent f assessed studen	ts: 7			
А	В	С	D	Е	FX
85.71	14.29	0.0	0.0	0.0	0.0
Provides: doc.	RNDr. Marián Ki	reš, PhD.	•	•	•
Date of last mo	dification: 01.03	.2018			
Approved: Gua CSc.Guaranteer	aranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteep	rof. PhDr. Oľga (Orosová,

University: P. J. Šafărik University in Košice Faculty: Faculty of Science Course ID: ÚFV/ Course name: Sciected General Physics Problems II VPF2/15 Course type, scope and the method: Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 3. Course level: II. Prerequisities: Per equisities: Conditions for course completion: presentation of selected problem 30 p writing exam 70 p A 100-90 B 89-80 C 79-70 D 69-60 F 59-50 F 49-0 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 1. 1.Mechanics -Coriolisova force •How Swing works Bicycle •Bicycle -Tides •Inertia 2. 2.Hydromechanics -Archimedes screw •Water flow -Archimedes size •Archimedes solution -Acoustic •Signal production -Fioating on water surface •Acoustic -Signal production <t< th=""></t<>
Faculty: Faculty of Science Course ID: ÚFV/ Course name: Selected General Physics Problems II VPF2/15 Course type, scope and the method: Course type, I.ecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: Course method: present Number of credits: 3 Recommended semester/trimester of the course: 3. Course level: II. Prerequisities: Conditions for course completion: presentation of selected problem 30 p witting exam 70 p A 100-90 B 89-80 C 79-70 D 69-60 E 59-50 F 49-0 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: I.Mechanics - *Coriolisova force + *How Swing works * Bieyele - *Tides - *Intria 2 2.Hydromechanics - *Archimedes principle in Action 3.Kapilarity *Water in plant - *Kapilaf hystersis - *Bubbles and soap + *Floating on water surface - *Acoustic -<
Course ID: ÚFV/ VPF2/15 Course name: Selected General Physics Problems II VPF2/15 Course type, scope and the method: Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 3. Course level: II. Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 1 Mechanics *Coriolisova force *How Swing works *Bicycle *Tides *Horbimechanics *Archimedes serew *Water flow *Archimedes serew *Water flow *Archimedes serew *Water in plant *Kapilar hysteresis *Bubbles and scap *Floating on water surface 4 Acoustic *Signal production *Human voice *Space acoustic *Signal production *Human voice *Space acoustic *Home ciname \$.Optics
Course type, scope and the method: Course type: Lccture Recommended course-load (hours): Per weck: 3 Per study period: 42 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 3. Course level: 11. Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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 scap +Floating on water surface 4. Acoustic -Signal production +Human voice -Space acoustic Home ciname 5.Optics
Number of credits: 3 Recommended semester/trimester of the course: 3. Course level: II. Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 1.Mechanics •Coriolisova force •How Swing works •Bicycle •Tides •Inertia 2.Hydromechanics •Archimedes principle in Action 3.Kapilarity •Water flow •Archimedes principle in Action 3.Kapilarity •Water in plant •Kapilar hysteresis Bubbles and soap •Floating on water surface 4.Acoustic •Signal production •Home ciname 5.Optics
Recommended semester/trimester of the course: 3. Course level: II. Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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 •Kapilar hysteresis •Bubbles and soap •Floating on water surface 4. Acoustic •Signal production •Home ciname 5.Optics
Course level: II. Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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 •Kapilar hysteresis •Bubbles and soap •Floating on water surface 4.Acoustic •Signal production •Huma voice •Space acoustic •Home ciname 5.Optics
Prerequisities: Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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 • Kapilar hysteresis • Bubbles and soap • Floating on water surface 4.Acoustic • Signal production • Human voice • Space acoustic • Home ciname 5.Optics
Conditions for course completion: 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 Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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 • Signet to the series of
Learning outcomes: Everyday phenomena are used for deeper and conceptual understanding of physics problem. Brief outline of the course: 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
Brief outline of the course: 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
•Opticalillusions

•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. Stepans, 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 Tulčinskyj · Zbierka kvalitatívnych úloh z fyziky SPN Bratislava 1990

7. Kašpar, E. : Problémové vyučovanie a problémové úlohy, SPN, Praha1982

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

Course assessment

Total number of assessed students: 6

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

Provides: doc. RNDr. Marián Kireš, PhD.

Date of last modification: 01.03.2018

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
Course ID: ÚMV/ VPPb/15	Course name: Scheduled practice teaching					
Course type, scope a Course type: Practic Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present					
Number of credits: 1						
Recommended seme	ster/trimester of the cours	e: 2.				
Course level: II.						
Prerequisities: KPE/	MPPa/15 and KPE/PDU/15	and (KPPaPZ/PaSPP/09 or KPPaPZ/PPgU/15)				
Conditions for cours	e completion:					
Learning outcomes: 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.						
Brief outline of the c	ourse:					
Recommended literature:						
Course language: Slovak						
Course assessment Total number of assessed students: 120						
abs n						
100.0 0.0						
Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.						
Date of last modification: 27.02.2018						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚFV/ VPSP/04	Course name: School Physics Experiments III			
Course type, scope a Course type: Practic Recommended cour Per week: 3 Per stu Course method: pre	nd the method: ce rse-load (hours): dy period: 42 esent			
Number of credits: 3				
Recommended seme	ster/trimester of the course: 3.			
Course level: II.				
Prerequisities:				
Conditions for cours continuous written ter active work in practis final oral examination	e completion: sts ses n			
Learning outcomes: The students gain ski experimental tasks, u lower and upper seco	lls and competencies to the own and effective organisation and solving of se of activities enhanced by digital technologies for physics teaching at ndary level.			
Brief outline of the c The practices are air selected school demo devices and computer	ourse: ned at practical realization and physics interpretation of different forms of nstration. The emphasis is on creative utilization of teaching aids and didactic r-aided experiments.			
Recommended litera Šucha, J.: Metodická Demkanin, P. a kol. P 2006, ISBN:80-89186 Ješková, Z., a kol. Vy pre stredné školy : uč 978-80-8086-146-9 Duľa, I. a kol. Využit základné školy : učeb 978-80-8086-154-4 Ješková, Z., Degro, J. ISBN 80 - 7097 - 451 http://physedu.scienc	ture: príručka pre rozkladný transformátor, Učebné pomôcky B.Bystrica, 1973 Počítačom podporované prírodovedné laboratórium, FMFI UK Bratislava, 6-10-6 ružitie informačných a komunikačných technológií v predmete Fyzika ebný materiál - modul 3 1. vyd Košice : Elfa, 2010 242 s., ISBN ie informačných a komunikačných technológií v predmete Fyzika pre oný materiál - modul 3 1. vyd Košice : Elfa, 2010 240 s., ISBN ., Onderová, Ľ.: Počítačom podporovaná výučba fyziky, PF UPJŠ, Košice, I -6 e.upjs.sk/sis/fyzika/experimenty/index.htm			
Course language:				
Slovak				
Course assessment Total number of asses	ssed students: 2			

А	В	С	D	Е	FX
0.0	100.0	0.0	0.0	0.0	0.0
Provides: doc. RNDr. Zuzana Ješková, PhD., doc. RNDr. Marián Kireš, PhD., RNDr. Ľudmila Onderová, PhD.					
Date of last modification: 01.03.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová,					

CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.
University: P. J	. Šafárik Univers	ity in Košice				
Faculty: Facult	Faculty: Faculty of Science					
Course ID: KPPaPZ/VPU/1	7 Course na	Course name: Developmental Psychology for Teachers				
Course type, so Course type: 1 Recommended Per week: 2 P Course metho	cope and the met Practice d course-load (h er study period: d: present	thod: ours): 28				
Number of cree	dits: 2					
Recommended	semester/trimes	ster of the cours	e: 1.			
Course level: II	[
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessn Total number o	nent f assessed studen	ts: 24				
А	В	С	D	Е	FX	
50.0	50.0 33.33 8.33 8.33 0.0 0.0					
Provides: Mgr. Mária Bačíková, PhD.						
Date of last modification: 21.08.2017						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	r. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C	Drosová,	

University: P. J. Šafárik University in Košice					
Faculty: Faculty of Science					
Course ID: KSSFaK/VSJU/15	se ID: Course name: Slovak Language for Teachers FaK/VSJU/15 Course name: Slovak Language for Teachers				
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 28 esent				
Number of credits: 2					
Recommended seme	ster/trimester of the course: 1., 3.				
Course level: II.					
Prerequisities:					
Conditions for cours passing a final test	e completion:				
Learning outcomes: Mastering of standard codification manuals of written communic characteristics of exp	I Slovak in spoken and written discouse. Becoming familiarized with , acquiring skills related to bibliography and quotation standards. Mastering ation in accordance with current orthographical rules. Mastering of basic ressions of text and style and fundamentals of text composition.				
Brief outline of the course: 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.					
Recommended litera Krátky slovník slove: Slovník súčasného sl Slovník súčasného sl Pravidlá slovenského KRÁĽ, Á.: Pravidlá s ONDRUŠ, Š. – SAB SABOL, J SLANČO 1989. SABOL, J. – BÓNO 2006. FINDRA, J.: Štylistil FINDRA, Ján: Štylis SLANČOVÁ, D.: Pra 1996. 178 s. ISBN 80	 Iture: nského jazyka. Bratislava: Veda 1997. ovenského jazyka. Bratislava: Veda 2006. ovenského jazyka. Bratislava: Veda 2011. pravopisu. Bratislava: Veda 2000. slovenskej výslovnosti. Bratislava, SPN 1984; 1988. 632 s. OL, J.: Úvod do štúdia jazykov. 3. vyd. Bratislava, SPN 1987. 343s. OVÁ, D SOKOLOVÁ, M.: Kultúra hovoreného slova. Prešov, FF UPJŠ VÁ, I. – SOKOLOVÁ, M.: Kultúra hovoreného prejavu. Prešov: FF PU ca slovenčiny. Martin : Osveta, 2004. tika slovenčiny v cvičeniach. Martin : Osveta, 2005. aktická štylistika. 2., upravené a doplnené vydanie. Prešov: Slovacontact 0-901417-9-X. 				

Course language:					
Course assessment					
Total number o	i assessed studen	18. 37	1		
Α	В	С	D	Е	FX
17.54	33.33	24.56	17.54	7.02	0.0
Provides: PhDr. Iveta Bónová, PhD., PhDr. Lucia Jasinská, PhD., Mgr. Lena Ivančová, PhD.					
Date of last modification: 24.08.2017					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University D. I. Čeféril: University in Kožice					
Enculty: Enculty of S	E k E k G				
Faculty: Faculty of S					
Course ID: UMV/ VSPc/15	Course name: Continuous practice teaching I				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 4t Course method: present					
Number of credits: 2					
Recommended seme	ster/trimester of the cours	e: 3.			
Course level: II.					
Prerequisities: ÚMV	/VPPb/15				
Conditions for cours	e completion:				
Learning outcomes: 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.					
Brief outline of the course:					
Recommended literature:					
Course language: Slovak					
Course assessment Total number of assessed students: 137					
	abs n				
100.0 0.0					
Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.					
Date of last modification: 27.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: ÚMV/ VSPd/15	Course name: Continuous practice teaching II				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 6t Course method: present					
Number of credits: 2					
Recommended seme	ster/trimester of the cours	e: 4.			
Course level: II.					
Prerequisities: ÚMV	Prerequisities: ÚMV/VSPc/15				
Conditions for cours	e completion:				
Learning outcomes: 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.					
Brief outline of the course:					
Recommended literature:					
Course language: Slovak					
Course assessment Total number of assessed students: 126					
	abs	n			
100.0 0.0					
Provides: doc. RNDr. Dušan Šveda, CSc., RNDr. Ingrid Semanišinová, PhD.					
Date of last modification: 27.02.2018					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					

University: P. J.	. Šafárik Univers	sity in Košice				
Faculty: Faculty	y of Science					
Course ID: KPPaPZ/ZMPP	V/15 Course na	Course name: The Fundamentals of Pedagogico-Psychological Research Methodology				
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present						
Number of crea	lits: 4					
Recommended	semester/trime	ster of the cours	e: 2.			
Course level: II	-					
Prerequisities:	KPPaPZ/PPgU/1	5 and KPE/PDU	/15			
Conditions for	course completi	ion:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	Course assessment Total number of assessed students: 381					
А	В	С	D	Е	FX	
15.49	15.49 23.62 25.2 21.52 13.91 0.26					
Provides: Mgr. Mária Bačíková, PhD., PhDr. Anna Janovská, PhD.						
Date of last modification: 21.08.2017						
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.						

University: P. J.	. Šafárik Univers	ity in Košice				
Faculty: Faculty	Faculty: Faculty of Science					
Course ID: KP ZSP/15	E/ Course na	Course name: Essentials of Special Education				
Course type, sc Course type: I Recommended Per week: 2 Po Course metho	ope and the met Lecture d course-load (h er study period: d: present	thod: ours): 28				
Number of crea	dits: 2					
Recommended	semester/trimes	ster of the cours	e: 3.			
Course level: II						
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	omes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Course assessm Total number of	ent f assessed studen	ts: 279				
А	В	С	D	Е	FX	
44.8	44.8 32.26 15.77 5.73 1.43 0.0					
Provides: Mgr. Katarína Petríková, PhD.						
Date of last modification: 05.02.2018						
Approved: Gua CSc.Guaranteep	ranteeprof. RND prof. RNDr. Jozef	or. Peter Kollár, I Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga C)rosová,	

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: KP ZZP/12	E/ Course na	Course name: Experiential Education			
Course type, sc Course type: 1 Recommender Per week: 1/2 Course metho	ope and the me Lecture / Practice d course-load (h 2 Per study peri d: present	thod: c ours): od: 14 / 28			
Number of cree	lits: 4				
Recommended	semester/trimes	ster of the cours	e: 1., 3.		
Course level: II	•				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Course assessm Total number o	ent f assessed studen	its: 213			
А	В	С	D	Е	FX
39.44	42.25	15.96	2.35	0.0	0.0
Provides: Paed	Dr. Renáta Orosc	ová, PhD., Mgr. k	Katarína Petríkova	á, PhD.	
Date of last mo	dification: 05.02	2.2018			
Approved: Gua CSc.Guaranteep	ranteeprof. RND rof. RNDr. Jozef)r. Peter Kollár, I f Doboš, CSc.	DrSc.Guaranteepr	of. PhDr. Ol'ga (Drosová,

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	ne: Seaside Aerobic Exercise			
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 36s Course method: present				
Number of credits: 2				
Recommended semester/trimest	er of the course:			
Course level: I., II.				
Prerequisities:				
Conditions for course completion Conditions for course completion Attendance	1:			
Learning outcomes: 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.				
 Brief outline of the course: 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 				
Recommended literature:				
Course language:				
Course assessment Total number of assessed students: 33				
abs				
12.12 87.88				
Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.				
Date of last modification: 18.08.2017				

Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Ol'ga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science					
Course ID: KSSFaK/ ČGUAP/15	Course name: Reading Literacy in Educational Process				
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present					
Number of credits: 2					
Recommended seme	ster/trimester of the cours	e: 2.			
Course level: II.					
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Course assessment Total number of assessed students: 18					
	abs	n			
	100.0 0.0				
Provides: doc. PaedDr. Ivica Hajdučeková, PhD.					
Date of last modification: 28.08.2017					
Approved: Guaranteeprof. RNDr. Peter Kollár, DrSc.Guaranteeprof. PhDr. Oľga Orosová, CSc.Guaranteeprof. RNDr. Jozef Doboš, CSc.					