University: P. J.	Šafárik Univers	ity in Košice	,		
Faculty: Faculty	of Science				
Course ID: KFa AFS/05	DF/ Course name: Antique Philosophy and Present Times				
Course type, sco Course type: P Recommended Per week: 2 Pe Course method	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 cred	its: 2				
Recommended s	semester/trimes	ter of the course	e: 2.		
Course level: I.,	II.				
Prerequisities:					
Conditions for a	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	Course language:				
Notes:					
Course assessme Total number of	ent `assessed studen	ts: 30			
A	В	С	D	E	FX
83.33	6.67	6.67	0.0	3.33	0.0
Provides: doc. P	hDr. Pavol Thol	t, PhD., mim.pro	f., Doc. PhDr. P	eter Nezník, CSc.	
Date of last mod	lification: 26.01	.2014			
Approved: prof.	RNDr. Stanisla	v Vokál, DrSc.			

University: P. J.	University: P. J. Šafárik University in Košice				
Faculty: Faculty	of Science				
Course ID: ÚFV AJF1/08	Course name: Applied Nuclear Physics				
Course type, sco Course type: L Recommended Per week: 2 Pe Course method	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 cred	its: 4				
Recommended s	semester/trimes	ster of the course	e: 3.		
Course level: II.					
Prerequisities:					
Conditions for c term project examination	course completi	on:			
Learning outcom Overview of pos	mes: ssible application	ns of nuclear radi	ation.		
Brief outline of Interaction of ra Biological effect of structural ana	Brief outline of the course: Interaction of radiation with matter. Application of nuclear radiation, new trends in medicine. Biological effects of radiation, radiation dose units, basics for limits of exposure. Nuclear methods of structural analysis Tracer techniques. Dating Activation analysis				ds in medicine. Nuclear methods
Recommended literature: 1. Cooper J.R, Randle K., Sokhi R.S.: Radioactive releases in the environment, J.Wiley &Sons, Ltd. 2003 2. R. L. Murray, Nuclear Energy, An Introduction to th Concepts, Systems, and Applications of Nuclear Processes 6th edition Elsevier 2009					
Course languag slovak and engli	Course language: slovak and english				
Notes:					
Course assessme Total number of	Course assessment Total number of assessed students: 8				
A	В	С	D	E	FX
75.0	12.5	12.5	0.0	0.0	0.0
Provides: RNDr	Provides: RNDr. Janka Vrláková, PhD.				
Date of last modification: 11.02.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J. Šafá	rik Universi	ty in Košice	
Faculty: Faculty of S	cience		
Course ID: KPPaPZ/KK/07	Course ID: Course name: Communication and Cooperation CPPaPZ/KK/07 Course name: Communication and Cooperation		
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present		
Number of credits: 2			
Recommended seme	ster/trimes	ter of the course: 3.	
Course level: II.			
Prerequisities:			
Conditions for cours	e completio	on:	
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:	Course language:		
Notes:			
Course assessment Total number of asses	ssed student	s: 281	
abs		n	Z
98.22		1.78	0.0
Provides: Mgr. Ondrej Kalina, PhD.			
Date of last modification: 04.02.2014			
Approved: prof. RNDr. Stanislav Vokál, DrSc.			

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚFV/ KZI1/03	Course name: Cosmic Rays				
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: 4	·				
Recommended seme	ster/trimester of the course: 3.				
Course level: II.					
Prerequisities:					
Conditions for cours Recherche work. Final examination.	e completion:				
Learning outcomes: To acquaint with the	basic characteristics of cosmic rays.				
Brief outline of the c Energetic particles in material. Detectors of cosmic r atmosphere. Solar cosmic rays. Modulation and prod Influence of geomage Acceleration mechan	Brief outline of the course: Energetic particles in space. Origin of cosmic rays. Interaction of cosmic ray particles with the material. Detectors of cosmic rays, X rays and gamma rays. Cosmic rays in the upper layers of the atmosphere. Solar cosmic rays. Modulation and production of cosmic rays in the heliosphere. Influence of geomagnetic field on cosmic ray particles. Acceleration mechanisms of cosmic rays				
 Recommended literature: 1. M.S. Longair: High Energy Astrophysics: Volume 1, Particles, Photons and Their Detection, Cambridge University Press, Feb 27, 1992 - Science - 440 pages. 2. M. S. Longair. High Energy Astrophysics, Volume 2: Stars, the galaxy, and the interstellar medium. Cambridge, second edition, 1994. 3. T. K. Gaisser. Cosmic Rays and Particle Physics. Cambridge, 1990. 4. L. Miroshnichenko, Solar Cosmic Rays, Springer, 2015 5. L.I. Dorman: Cosmic Rays in the Earth's Atmosphere and Underground, Springer, 2004. 6. K. Kudela: On energetic particles in space, acta physica slovaca vol. 59 No. 5, 537 – 652, oct. 2009. 					
Course language:					
Notes:					

Course assessment Total number of assessed students: 21					
А	В	С	D	Е	FX
95.24	4.76	0.0	0.0	0.0	0.0
Provides: prof. Ing. Karel Kudela, DrSc.					
Date of last modification: 11.02.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J.	University: P. J. Šafárik University in Košice				
Faculty: Faculty	of Science				
Course ID: ÚFV PPA/07	V/ Course na	/ Course name: Data Analysis Tools			
Course type, sc Course type: L Recommended Per week: 2 / 2 Course method	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present				
Number of cred	lits: 4				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: II					
Prerequisities:					
Conditions for of solving partial ta semestral project	course completi asks ets	on:			
Learning outco To provide the s	mes: students with OS	UNIX and progr	amming langua	ge C,C++.	
Brief outline of Operating system methods of prog ROOT environm	Brief outline of the course: Operating system UNIX. Programming language C and the bases of C++ for physicists. Advanced methods of programming in C++. ROOT - An Object Data Analysis Framework. Programming in ROOT environment				cists. Advanced Programming in
Recommended Hans Petter Lan Shai Vaingast, E Ajay D. Ksheml systems Cambridge Univ Lee Gillam, Clo	Recommended literature: Hans Petter Langtangen, A Primer on Scientific Programming with Python, Springer 2009 Shai Vaingast, Beginning Python visualization, Apress 2009 Ajay D. Kshemkalyani, Mukesh Singhal, Distributed computing: principles, algorithms, and systems Cambridge Univ. Press 2008 Lee Gillam, Cloud Computing: Principles, Systems and Applications, Springer 2010				ger 2009 ithms, and 10
Course languag	ge:				
Notes:					
Course assessm Total number of	ent assessed studen	ts: 5			
А	В	С	D	E	FX
60.0	0.0	0.0	0.0	20.0	20.0
Provides: RND	Provides: RNDr. Alexander Dirner, CSc., Ing. Jozef Černák, PhD.				
Date of last modification: 11.02.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J.	Šafárik Univers	sity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚFV DPO/14	ÚFV/ Course name: Diploma Thesis and its Defence				
Course type, sco Course type: Recommended Per week: Per Course method	pe and the me course-load (f study period: : present	thod: 10urs):			
Number of credi	ts: 20				
Recommended s	emester/trime	ster of the cours	e:		
Course level: II.					
Prerequisities:					
Conditions for c	ourse complet	ion:			
Learning outcon	nes:				
Brief outline of t	he course:				
Recommended li	iterature:				
Course language	2:				
Notes:					
Course assessme Total number of	ent assessed studer	nts: 2			
A	В	C	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides:		<u>.</u>		<u>.</u>	<u> </u>
Date of last mod	ification: 17.0	2.2014			
Approved: prof.	RNDr. Stanisla	w Vokál, DrSc.			

University: P. J.	University: P. J. Šafárik University in Košice				
Faculty: Faculty	y of Science				
Course ID: ÚF FEC1/04	V/ Course n	Course name: Elementary Particle Physics			
Course type, sc Course type: I Recommended Per week: 4 / 2 Course metho	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 2 Per study period: 56 / 28 Course method: present				
Number of crea	lits: 8				
Recommended	semester/trime	ester of the cours	e: 1.		
Course level: II					
Prerequisities:					
Conditions for	course complet	tion:			
Learning outco To obtain basic quantum chrom	mes: knowledge of odynamics.	particle physics v	which is necessar	ry for quantum f	ield theory and
discoveries of e dynamics, elect laws, parity, cha symmetry, phys	Definition, sources and detection of elementary particles, relativistic kinematics, history of discoveries of elementary particles, basic experiments, quark model, particle classification, particle dynamics, electromagnetic interaction, strong and weak interaction, symmetries and conservation laws, parity, charge conjugation, CP symmetry, experiments with violation of spatial and combined symmetry, physics beyond the Standard Model.				ication, particle ication, particle nd conservation il and combined
 Recommended literature: 1. D. Griffiths: Introduction to Elementary Particles, Wiley-VCH, 2008, ISBN 978-3-527-40601-2 2. A. Bettini: Introduction to Elementary Particle Physics, Cambridge University Press, 2008, ISBN 978-0-521-88021-3 3. B. Martin and G. Shaw: Particle Physcis, Wiley, 2008, ISBN 978-0-470-03293-0 4. D. Perkins: Introduction to High Energy Physics, Cambridge University Press, 2000, ISBN 978-0521621960 					
Course languag	Course language:				
Notes:	Notes:				
Course assessm Total number of	Course assessment Total number of assessed students: 13				
А	В	С	D	Е	FX
61.54	23.08	0.0	7.69	7.69	0.0
Provides: RND	r. Marek Bomba	ura, PhD., RNDr. Z	Zuzana Fecková	<u> </u>	
Date of last mo	dification: 11.0	2.2014			

Approved: prof. RNDr. Stanislav Vokál, DrSc.

University: P. J. Šafár	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚFV/ EJF1a/04	Course name: Experimental Methods of Nuclear Physics					
Course type, scope a Course type: Lectur Recommended cour Per week: 4 / 1 Per Course method: pre	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 4 / 1 Per study period: 56 / 14 Course method: present					
Number of credits: 8						
Recommended seme	ster/trimester of the course: 3.					
Course level: II.						
Prerequisities:						
Conditions for cours thesis exam	e completion:					
Learning outcomes: Acquire basic knowle complex and basis of	edges of the principles of particle detectors, construction of large detectors electronics in subnuclear physics.					
Brief outline of the c Principles and constr chambers, MWPC. D (pixels/strips). Scintil Methods of physical coordinates, paths, an flight). Calorimetr target and collider ex Basis of electronics u specialness). Analog calibration of measur characteristics of int detectors, calorimeter	ourse: uction of particle detectors: quantities characterizing detectors. Proportional rift chambers, TPC. Special types of gas detectors, MSGC. Silicon detectors ators and photodetectors. quantities measurement: Vertex detectors. Track detectors (measurement of ngles, momenta). Charged particle identification (ionisation losses, time of y, electromagnetic and hadron calorimeters. Large detector systems, fixed periments. used in subnuclear physics (fundamental concepts, principles, requirements, and digital processing of signal (front-end). Electronic and physical ement (calibration system). Selection systems (trigger), principles (physical eresting events, electronical realization), levels. Data readout from track rs and particle identifing detectors. Data acquisition systems (DAQ).					
Recommended litera Fernow R.: Introducti Grupen C.: Particle d Kleinknecht K.: Dete Bartke J.: Introductio 2009.	ture: ion to experimental particle physics, Cambridge, 1986. etectors, Cambridge, 1996 ctors for particle radiation, Cambridge, 1986. n to Relativistic Heavy Ion Physics, World Scientific Publishing, Singapore,					
slovak and english						
Notes:						

Course assessment Total number of assessed students: 15					
А	В	С	D	Е	FX
40.0	46.67	6.67	6.67	0.0	0.0
Provides: Ing. Jozef Černák, PhD., RNDr. Adela Kravčáková, PhD.					
Date of last modification: 11.02.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	Faculty: Faculty of Science				
Course ID: KFa DF2p/03	aDF/ Course n a	DF/ Course name: History of Philosophy 2 (General Introduction)			
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 / 1 Per study period: 28 / 14 Course method: present				
Number of crea	lits: 4				
Recommended	semester/trimes	ster of the cours	e: 2.		
Course level: I.	, II.				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	Course language:				
Notes:					
Course assessm Total number of	1ent f assessed studen	uts: 729			
А	В	С	D	Е	FX
60.49	13.85	12.76	8.78	3.43	0.69
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof., Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., Mgr. Róbert Stojka, PhD.					
Date of last mo	dification: 26.01	.2014			
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

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	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 course: 2.					
Course level: I., II.						
Prerequisities:						
Conditions for cours written test and thesis exam	Conditions for course completion: written test and thesis exam					
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	Brief outline of the course: Evolution of knowledge before Galileo. Evolution of physics within the mechanical picture of the world. Evolution and limits of classical physics, phase of breakthrough in physics. Origin and evolution of the theory of relativity. Quantum physics and prospects of further evolution of physics and their application. Contemporary state of physical research and its application in technology, natural sciences and philosophy. Position of physics in our society.					
 Recommended literature: 1. R.Zajac, J.Chrapan: Dejiny fyziky, skriptá, MFF UK, Bratislava, 1982. 2. V.Malíšek: Co víte o dějinách fyziky, Horizont, Praha, 1986. 3. I.Kraus, Fyzika v kulturních dějinách Evropy, Starověk a středověk, Nakladatelství ČVUT, Praha, 2006. 4. A.I.Abramov: Istoria jadernoj fiziky, KomKniga, Moskva, 2006. 5. L.I.Ponomarev: Pod znakom kvanta, Fizmatlit, Moskva, 2006. 6. I.Kraus, Fyzika v kulturních dějinách Evropy, Od Leonarda ke Goethovi, Nakladatelství ČVUT, Praha, 2007. 7. I.Kraus, Fyzika od Thaléta k Newtonovi, Academia, Praha, 2007. 8. I.Štoll, Dějiny fyziky, Prometheus, Praha, 2009. 9. www-pages. 10.Brandt S., The harvest of a century, Discoveries of modern physics in 100 episodes, Oxford, 2009. 						
Course language:						
Notes:						

Course assessment Total number of assessed students: 11						
А	A B C D E FX					
63.64	63.64 18.18 18.18 0.0 0.0 0.0					
Provides: prof. RNDr. Stanislav Vokál, DrSc.						
Date of last modification: 11.02.2014						
Approved: prof	Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J.	Šafárik Univers	ity in Košice				
Faculty: Faculty	of Science					
Course ID: KFa KDF/05	DF/ Course na Centuries	DF/ Course name: Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction)				
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 cred	lits: 2					
Recommended	semester/trimes	ster of the cours	e: 2.			
Course level: I.,	, II.					
Prerequisities:						
Conditions for a	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessment Total number of assessed students: 10						
A	В	С	D	Е	FX	
50.0	50.0 20.0 10.0 0.0 10.0 10.0					
Provides: doc. PhDr. Pavol Tholt, PhD., mim.prof.						
Date of last modification: 26.01.2014						
Approved: prof. RNDr. Stanislav Vokál, DrSc.						

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB10/14	ourse ID: R UPJŠ/ Course name: IB10 - Medzinárodný certifikát ECo-C 310/14				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: -se-load (hours): y period: sent				
Number of credits: 1	6				
Recommended seme	ster/trimester of the course:				
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs	n	neabs			
0.0	0.0 0.0 0.0				
Provides:					
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, DrSc.				

University: P. J. Šafá	rik University in	n Košice			
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB11/14	ourse ID: R UPJŠ/ Course name: IB11 - Medzinárodný certifikát ECDL 311/14				
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	4				
Recommended seme	ster/trimester	of the course:			
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs	abs n neabs				
0.0	0.0 0.0 0.0				
Provides:	I				
Date of last modifica	tion: 11.08.201	4			
Approved: prof. RNI	Dr. Stanislav Vo	kál, DrSc.			

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: R UPJŠ/ IB12/14	Course ID: R UPJŠ/ Course name: IB12 - Používanie, administrácia a vývoj v systéme SAP B12/14			
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: 5	4			
Recommended seme	ster/trimester of the course:			
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment Total number of asses	ssed students: 0			
abs	n	neabs		
0.0	0.0 0.0 0.0			
Provides:	1			
Date of last modifica	tion: 11.08.2014			
Approved: prof. RNI	Dr. Stanislav Vokál, DrSc.			

University: P. J. Šafá	rik University	in Košice		
Faculty: Faculty of S	cience			
Course ID: R UPJŠ/ IB1/14	I rse ID: R UPJŠ/ Course name: IB1 - Etika v biomedicínskych vedách pre zdravotnícku praz /14			
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method rse-load (hour ly period: esent	l: s):		
Number of credits: 1	.6			
Recommended seme	ster/trimester	of the course:		
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment Total number of asses	ssed students: ()		
abs		n	neabs	
0.0	0.0 0.0 0.0			
Provides:	I		1	
Date of last modifica	tion: 11.08.20	14		
Approved: prof. RNI	Dr. Stanislav Vo	okál, DrSc.		
-				

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB2/14	ourse ID: R UPJŠ/ Course name: IB2 - Právne minimum – súkromnoprávne aspekty 32/14				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: cse-load (hours): y period: csent				
Number of credits: 1	6				
Recommended seme	ster/trimester of the course:				
Course level: I., I.II.,	II				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs	n	neabs			
0.0	0.0 0.0 0.0				
Provides:	I				
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, DrSc.				

University: P. J. Šafár	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB3/14	ourse ID: R UPJŠ/ Course name: IB3 - Právne minimum – verejnoprávne aspekty 33/14				
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	6				
Recommended seme	ster/trimester of the course:				
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs	n	neabs			
0.0	0.0 0.0 0.0				
Provides:	I				
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, DrSc.				

University: P. J. Šafá	rik University in Košice	2			
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB4/14	ourse ID: R UPJŠ/ Course name: IB4 - Projektový manažment 34/14				
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	0				
Recommended seme	ster/trimester of the co	ourse:			
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs		n	neabs		
0.0	0.0 0.0 0.0				
Provides:	1		· · · · · ·		
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, DrS	Sc.			

University: P. J. Šafá	rik University in Košic	e			
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB5/14	ourse ID: R UPJŠ/ Course name: IB5 - Manažérska ekonomika 35/14				
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	6				
Recommended seme	ster/trimester of the c	ourse:			
Course level: 1., 1.11.,	11.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs		n	neabs		
0.0	0.0 0.0 0.0				
Provides:	l l				
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, Dr.	Sc.			

University: P. J. Šafá	rik University i	n Košice		
Faculty: Faculty of S	cience			
Course ID: R UPJŠ/ IB6/14	urse ID: R UPJŠ/ Course name: IB6 - Riešenie konfliktných a krízových situácií v školskej 6/14 praxi			
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method rse-load (hours y period: esent	l: s):		
Number of credits: 1	6			
Recommended seme	ster/trimester	of the course:		
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language:				
Notes:				
Course assessment Total number of asses	ssed students: 0)		
abs		n	neabs	
0.0	0.0 0.0 0.0			
Provides:	I		1	
Date of last modifica	tion: 11.08.201	14		
Approved: prof. RNI	Dr. Stanislav Vo	okál, DrSc.		

University: P. J. Šafá	rik University in Koši	ce			
Faculty: Faculty of S	cience				
Course ID: R UPJŠ/ IB7/14	ourse ID: R UPJŠ/ Course name: IB7 - Štatistika pre prax 37/14				
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	6				
Recommended seme	ster/trimester of the	course:			
Course level: 1., 1.11.,	11.				
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students: 0				
abs		n	neabs		
0.0	0.0 0.0 0.0				
Provides:	I		· · ·		
Date of last modifica	tion: 11.08.2014				
Approved: prof. RNI	Dr. Stanislav Vokál, D	rSc.			

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University: P. J. Šafár	rik University in Košice	
Faculty: Faculty of S	cience	
Course ID: R UPJŠ/ IB8/14	Course name: IB8 - Environmentálne as	spekty záťaže životného prostredia
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: rsent	
Number of credits: 1	6	
Recommended seme	ster/trimester of the course:	
Course level: I., I.II.,	II	
Prerequisities:		
Conditions for cours	e completion:	
Learning outcomes:		
Brief outline of the c	ourse:	
Recommended litera	ture:	
Course language:		
Notes:		
Course assessment Total number of asses	ssed students: 0	
abs	n	neabs
0.0	0.0	0.0
Provides:		-
Date of last modifica	tion: 11.08.2014	
Approved: prof. RNI	Dr. Stanislav Vokál, DrSc.	

University: P. J. Šafá	rik University in	n Košice	
Faculty: Faculty of S	cience		
Course ID: R UPJŠ/ IB9/14	Course name:	IB9 - Medzinárodný ce	rtifikát TOEFL
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	7		
Recommended seme	ster/trimester	of the course:	
Course level: I., I.II.,	II.		
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	ture:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 0		
abs		n	neabs
0.0		0.0	0.0
Provides:	I		
Date of last modifica	tion: 11.08.201	4	
Approved: prof. RNI	Dr. Stanislav Vo	kál, DrSc.	

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science				
Course ID: KFa IH2/03	DF/ Course na	ame: Idea Humar	nitas 2 (General 1	Introduction)	
Course type, sco Course type: P Recommended Per week: 2 Pe Course method	ope and the met tractice I course-load (h er study period: d: present	thod: ours): 28			
Number of cred	lits: 2				
Recommended	semester/trimes	ster of the cours	e: 3.		
Course level: II.					
Prerequisities:					
Conditions for o	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	e:				
Notes:	,				
Course assessm Total number of	ent assessed studen	ts: 4			
A	В	B C D E FX			
75.0	25.0	0.0	0.0	0.0	0.0
Provides: Doc. 1	PhDr. Peter Nezr	ník, CSc.		·	1
Date of last mo	dification: 26.01	.2014			
Approved: prof.	. RNDr. Stanisla	v Vokál, DrSc.			

University: P. J	. Šafárik Univers	sity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚF PSD/14	V/ Course na	ame: Introduction	n to distributed o	lata processing	
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	ope and the me Lecture d course-load (h er study period: d: present	thod: cours): : 28			
Number of cree	lits: 4				
Recommended	semester/trime	ster of the cours	e: 2.		
Course level: II	•				
Prerequisities:					
Conditions for	course complet	ion:			
Learning outco Introductory lea	omes: ctures to basics o	f parallel data pr	ocessing on anal	ysis farms.	
Scripting in Un Simple paramet Basic principles Basic principles Implementation	ix/Linux rization of jobs of of batch farm of of interactive fa	on analyses farms rganizations arm organizations of job paralelizat	s s ion		
Recommended https://www.gn http://www.ada http://root.cern. http://xrootd.org https://eos.read	literature: u.org/software/b ptivecomputing.o ch/drupal/ g/ thedocs.org/en/la	ash/ com/products/op(itest/	en-source/torque	>/	
Course languaş English	ge:				
Notes:					
Course assessm Total number of	ent f assessed studer	nts: 0			
А	В	С	D	Е	FX
0.0	0.0	0.0	0.0	0.0	0.0
Provides: doc.]	RNDr. Jozef Urb	án, CSc., RNDr.	Martin Val'a, Ph	D.	
Date of last mo	dification: 11.02	2.2014			
Approved: prof	. RNDr. Stanisla	v Vokál, DrSc.			

University: P. J	. Šafárik Univers	sity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚF UMJF/06	V/ Course na	ame: Introductio	n to Experiment	al Methods in Nu	clear Physics
Course type, sc Course type: I Recommended Per week: 2 / 2 Course metho	ope and the me Lecture / Practice d course-load (h l Per study peri d: present	thod: e iours): od: 28 / 14			
Number of crea	dits: 4				
Recommended	semester/trime	ster of the cours	se: 1.		
Course level: II	•				
Prerequisities:					
Conditions for written tests and exam	course complet d thesis	ion:			
Learning outco Students will a principles of ac	mes: cquire basic kno celeration and de	wlwdges on int etection of eleme	eractions of ion ntary particles.	izing radiation in	the matter and
Brief outline of Accelerators of the matter. Ene gamma radiatio Scintillation de particles. Track	the course: charged particle ergy loss of char n with matter. Tr tectors. Cherenk ing detectors.	es - linear and c rged particles. M ansition radiation tov detectors. Se	ircular,colliding Aultiple scatterin n. Particle detect miconductor de	beams. Particle p ng. Interactions of ion. Gaseous ioni tectors. Spectrom	passage through of electrons and zation detectors. hetry of charged
Recommended 1 Kleinknecht 2 Fernow R.: 3 Leo W.R., T York Berlin He 4 Grupen C.: 5 Slugeň V. a	literature: K., Detectors fo Introduction to e echniques for Nu idelberg, 1994. Particle detectors iní, Jadrovo-ener	r particle radiation xperimental part uclear and Partic s, Cambridge, 19 rgetické zariaden	on, Cambridge, icle physics, Car le Physics Exper 96. ia, STU Bratisla	1986. nbridge, 1986. timents, Springer va, 2003.	Verlag, New
Course languages slovak and engli	ge: ish				
Notes:					
Course assessm Total number of	ent f assessed studer	nts: 13			
А	В	C	D	Е	FX
69.23	23.08	0.0	7.69	0.0	0.0
Provides: prof.	RNDr. Stanislav	Vokál, DrSc., R	NDr. Adela Krav	včáková, PhD.	<u>. </u>

Date of last modification: 11.02.2014

Approved: prof. RNDr. Stanislav Vokál, DrSc.

University: P. J. Šafá	rik University in Košice
Faculty: Faculty of S	cience
Course ID: ÚFV/ ZDC/14	Course name: Introduction to particle detection by calorimetric methods
Course type, scope a Course type: Lectur Recommended cour Per week: 2 Per stu Course method: pre	nd the method: e rse-load (hours): dy period: 28 esent
Number of credits: 4	
Recommended seme	ster/trimester of the course: 2.
Course level: II.	
Prerequisities:	
Conditions for cours	e completion:
Learning outcomes: Special lectures as in	toduction to partcle calorimetry.
PASSAGE OF PART Electronic energy los in a single collision Stopping power at in low energies Energetic knock-on e Fluctuations in energy Multiple scattering th Photon and electron i Collision energy loss Critical energy, Energ Photonuclear and ele energy Cherenkov and transi Optical Cherenkov ra Coherent Cherenkov ra Coherent Cherenkov CALORIMETERS Principles of Calorim Electromagnetic and Shower Profiles and Electromagnetic calo Hadronic calorimeter Free electron drift ve Types of Calorimeter Compensating and no Total Absorption, San	s by heavy particles, Moments and cross sections, Maximum energy transfer termediate energies, Mean excitation energy, Density effect, Energy loss at lectrons (δ rays), Restricted energy loss rates for relativistic ionizing particles y loss, Energy loss in mixtures and compounds, Ionization yields rough small angles, nteractions in matter es by e±, Radiation length, Bremsstrahlung energy loss by e± gy loss by photons, Bremsstrahlung and pair production at very high energies cctronuclear interactions at still higher energies , Muon energy loss at high tion radiation diation radiation etry Hadronic Showers Containment rimeters s locities in liquid ionization chamber s: on-compensating npling, homogeneous

Scintillation, Io Signal Detection Shower shapes Fluctuations in Position resolut Shower maxim Signal read-ou electromagnetic that of the jet en Energy and pos	nization, Cherenl n in hadron calorin hadronic energy ion in the calorin um detectors at, processing, e and hadron calo nergy scale.(Getti ition resolution in	kov neters measurements neters calibration of orimeters, jet reco ing from calorim n calorimetry.	readout electronstruction, dete etry to physics r	onics. Physics rmination of mis esults)	calibration of ssing energy and
Recommended http://pdg.lbl.go http://indico.cen http://www.slid calorimetry_end http://www-ppo phttp://www-gr http://indico.cen http://www.kip.	literature: ov/2013/reviews/ rn.ch/getFile.py/a efinder.net/c/ ergy_measuremen l.fnal.gov/EPPOf roup.slac.stanford rn.ch/getFile.py/a uni-heidelberg.de	contents_sports.l access?contribId= nts_prof_robin/2 ffice-w/Academid l.edu/sluo/lecture access?contribId= e/atlas/seminars/	ntml =24&resId=0&m 52b_lecture8/27 c_Lectures/DGra ss/detector_lectu =24&resId=0&m WS2009_JC/con	naterialId=slides& 257380 een.pd re_files/detectorl naterialId=slides& npensation1	&confId=44587 ectures_13.pd &confId=44587
Course languag English	ge:				
Notes:					
Course assessm Total number o	nent f assessed studen	ts: 3			
А	B C D E FX				
100.0	100.0 0.0 0.0 0.0 0.0 0.0				
Provides: doc. Stríženec, CSc.	RNDr. Jozef Urba	án, CSc., doc. RI	NDr. Dušan Brui	ncko, CSc., RND	r. Pavol
Date of last mo	dification: 11.02	2.2014			
Approved: prot	f. RNDr. Stanisla	v Vokál, DrSc.			

Faculty: Faculty of Science Course ID: ÚFV/ ZMSE/07 Course name: Introduction to Simulations and Modeling of Experiments ZMSE/07 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: 4 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80(6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course assessment Total number of assessed students: 7 A B C A B C D A B C D A </th <th>University: P. J. Šafá</th> <th>rik Univers</th> <th>ity in Košice</th> <th></th> <th></th> <th></th>	University: P. J. Šafá	rik Univers	ity in Košice			
Course ID: ÚFV/ ZMSE/07 Course type, scope and the 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 credits: 4 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Control of the course: 2. Course level: II. Prerequisities: Control of the course: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F:: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD:80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course tanguage: Notes: Cond E FX A B C D E FX Stop E FX	Faculty: Faculty of S	Science				
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: 4 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cem.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course assessment Total number of assessed students: 7 A B C D F FX 85.71 0.0 0.0 0.0 14.29 0.0 <t< td=""><td>Course ID: ÚFV/ ZMSE/07</td><td colspan="5">Course name: Introduction to Simulations and Modeling of Experiments</td></t<>	Course ID: ÚFV/ ZMSE/07	Course name: Introduction to Simulations and Modeling of Experiments				
Number of credits: 4 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course language: Notes: Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.4.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D E FX Dat of last modifi	Course type, scope a Course type: Lectu Recommended cou Per week: 2 / 1 Per Course method: pr	and the met re / Practice rse-load (h study perio esent	thod: ours): od: 28 / 14			
Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course assessment Total number of assessed students: 7 A B C D E FX A B C D E FX A B C D	Number of credits: 4	4				
Course level: II. Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random number generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course language: Notes: Course assessment Total number of assessed students: 7 A A A C D FX A C D FX A	Recommended seme	ester/trimes	ster of the course	:: 2.		
Prerequisities: Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. Date of last modification: 11.02.2014 A B	Course level: II.					
Conditions for course completion: Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://placzek.nome.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course language: Notes: Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. Date of last modification: 11.02.2014	Prerequisities:					
Learning outcomes: Introduce the basics of Monte-Carlo methods and the applications in the simulation of high energy physics processes. Brief outline of the course: Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course language: Notes: Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D E FX Date of last modification: 11.02.2014 Annroved: prof. RNDr. Stanislay Vokál DrSc	Conditions for cour	se completi	on:			
Mathematical foundations of Monte-Carlo methods. Buffon's needle and basic MC methods. Comparisons of Monte-Carlo integrations with numerical quadrature. Random number generators (random numbers, random numbers generation, tests of random number generators). Monte-Carlo simulations of high energy physics processes. Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, http://en.wikipedia.org/wiki/Monte_Carlo_method Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. Date of last modification: 11.02.2014 Annroved: prof. RNDr. Stanislay Vokál. DrSc.	Learning outcomes: Introduce the basics physics processes. Brief outline of the o	of Monte-C	arlo methods and	the applications	s in the simulation	of high energy
Recommended literature: James F.: Monte-Carlo theory and practice, Rep. Prog. Phys. 43, 1980, s. 1145-1189; Cern preprint DD/80/6, February 1980. http://placzek.home.cern.ch/placzek/lectures, Notes: Course language: Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 14.29 0.0 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D D E <t< td=""><td>Mathematical found Comparisons of Mor (random numbers, ra simulations of high e</td><td>ations of M nte-Carlo int andom numb energy physi</td><td>fonte-Carlo methes tegrations with nupers generation, te tics processes.</td><td>ods. Button's imerical quadra ests of random r</td><td>needle and basic ture. Random nun number generators</td><td>MC methods. nber generators a). Monte-Carlo</td></t<>	Mathematical found Comparisons of Mor (random numbers, ra simulations of high e	ations of M nte-Carlo int andom numb energy physi	fonte-Carlo methes tegrations with nupers generation, te tics processes.	ods. Button's imerical quadra ests of random r	needle and basic ture. Random nun number generators	MC methods. nber generators a). Monte-Carlo
Course language: Notes: Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D E FX Date of last modification: 11.02.2014 0.0 0.0 0.0	Recommended liter: James F.: Monte-Car preprint DD/80/6, Fe http://placzek.home. http://en.wikipedia.o	ature: lo theory ar bruary 1980 cern.ch/plac rg/wiki/Mor	nd practice, Rep. I 0. zzek/lectures, nte_Carlo_metho	Prog. Phys. 43, d	1980, s. 1145-118	9; Cern
Notes: Course assessment Total number of assessed students: 7 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D E FX Date of last modification: 11.02.2014 0.0 0.0 14.29	Course language:					
Course assessment Total number of assessed students: 7 A B C D E FX 85.71 0.0 0.0 0.0 14.29 0.0 Provides: doc. RNDr. Jozef Urbán, CSc. D E FX Date of last modification: 11.02.2014 0.0 0.0 14.29 0.0	Notes:					
ABCDEFX85.710.00.00.014.290.0Provides: doc. RNDr. Jozef Urbán, CSc.Date of last modification: 11.02.2014Approved: prof RNDr. Stanislay Vokál DrSc	Course assessment Total number of asse	essed studen	ts: 7			
85.710.00.014.290.0Provides: doc. RNDr. Jozef Urbán, CSc.Date of last modification: 11.02.2014Image: Comparison of the standard sta	Α	В	С	D	Е	FX
Provides: doc. RNDr. Jozef Urbán, CSc. Date of last modification: 11.02.2014 Approved: prof. RNDr. Stanislay Vokál. DrSc.	85.71	0.0	0.0	0.0	14.29	0.0
Date of last modification: 11.02.2014	Provides: doc. RND	r. Jozef Urba	án, CSc.			
Approved: prof RNDr Stanislay Vokál DrSc	Date of last modific:	ation: 11.02	2.2014			
Approven prot. Really tokal, Dibe.	Approved: prof. RN	Dr. Stanisla	v Vokál, DrSc.			

Faculty of Science Course ID: ÚFV/ Course name: Introductory Medical Physics UKF/12 Course name: Introductory Medical Physics
Course ID: ÚFV/ Course name: Introductory Medical Physics
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: 4
Recommended semester/trimester of the course: 1.
Course level: II.
Prerequisities:
Conditions for course completion:
 Provide an overview of physical principles and methods of application of ionizing radiation in medicine - in the radiological diagnosis, nuclear medicine, radiation and principles of radiation protection against the effects of ionizing radiation. Brief outline of the course: The basic concepts of medical physics. Medical physics, principles, values and units used in medical physics. Sources of ionizing radiation used in medicine - radionuclides and generators. Photon interactions. Electron interactions. Interaction of protons, neutrons and heavy ions. X - rays and electron radiations of generators, accelerators. Overview of irradiation techniques (CRT, IMRT, stereotactic therapy). Physical principles of brachytherapy. Review of methods of clinical dosimetry, the principles of the detection and measurement of ionizing radiation. Therapeutic techniques and applications of planning systems for radiation oncology. Radiobiology models for prediction of the effects of ionizing radiation. Principles of radiation protection and current legislation. Recommended literature:
1. Podorsak E.B., et al. : Radiation Oncology Physics, IAEA
2. Kahn F.M.: The Physics of radiation Therapy ,Lippincott Williams and Wilkins
Course language:
Notes:
Course assessment Total number of assessed students: 3
A B C D E FX
100.0 0.0 0.0 0.0 0.0
Provides: doc. RNDr. Jozef Urbán, CSc., doc. RNDr. Pavel Matula, CSc.
Date of last modification: 11.02.2014

Approved: prof. RNDr. Stanislav Vokál, DrSc.
University: P. J. Ša	afárik Univers	ity in Košice				
Faculty: Faculty o	f Science					
Course ID: ÚFV/ KDO1/14	Course na	me: Methods of	Clinical Dosim	etry		
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	s: 4					
Recommended ser	mester/trimes	ster of the course	e: 2.			
Course level: II.						
Prerequisities:						
Conditions for co	urse completi	on:				
Learning outcome Basic methods of o	es: clinical dosime	etry.				
Brief outline of th The basic concepts radiation. The do topometry and dos tomograph slices)	e course: s of clinical do se measurements simetry of bea on simulation	osimetry and its rate that methods. New ms "in phantoms methods and it's	adiotherapy app ew trends in c " and "in vivo" using on radiot	lications. The sou linical dosimetry dosimetry. 3D-fi herapy.	PC supported gures (based on	
Recommended lite 1. Podorsak E.Be 2. Kahn F.M. The	erature: et al. : Radiatic Physics of Ra	on Oncology Physical diation Therapy, 2	sics , IAEA Lippincott Willi	iams and Wilkins		
Course language:						
Notes:						
Course assessment Total number of assessed students: 3						
Α	В	С	D	E	FX	
100.0	100.0 0.0 0.0 0.0 0.0					
Provides: doc. RNDr. Jozef Urbán, CSc., doc. RNDr. Pavel Matula, CSc.						
Date of last modification: 11.02.2014						
Approved: prof. RNDr. Stanislav Vokál, DrSc.						

University: P. J. Šafárik University in Košice							
Faculty: Faculty of Science							
Course ID: ÚTVŠ/ NJ//13	Course ID: ÚTVŠ/ Course name: Naval Yachting						
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present							
Number of credits: 2							
Recommended seme	ster/trimester of the cours	e:					
Course level: I., II.							
Prerequisities:							
Conditions for cours	e completion:						
Learning outcomes:							
Brief outline of the c	ourse:						
Recommended litera	iture:						
Course language:							
Notes:							
Course assessment Total number of asses	Course assessment Total number of assessed students: 2						
	abs n						
100.0 0.0							
Provides: doc. Mgr. Rastislav Feč, PhD.							
Date of last modification: 15.01.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J	. Šafárik Univer	sity in Košice					
Faculty: Facult	y of Science			-			
Course ID: ÚF IKTN/03	V/ Course n	Course name: New Information and Communication Technologies					
Course type, so Course type: Recommended Per week: 1/2 Course metho	ope and the me Lecture / Practic d course-load (l 2 Per study per d: present	thod: e nours): iod: 14 / 28					
Number of cree	dits: 4						
Recommended	semester/trime	ster of the cours	e: 3.				
Course level: II	•						
Prerequisities:							
Conditions for	course complet	ion:					
Learning outco Presentation of education, resea	mes: new information arch activities as	and communicat well as in popula	ion technologies risation of scien	s and their practicates	al application in		
Brief outline of Introduction to (videoconferen- Presentation an	the course: o new trends cing, webcastin d individual trai	od communica g, videostreamir ning.	tions with vo ng,video on de	ice and video emand, distance	using Internet learning etc.).		
Recommended http://www.vrv/ http://evo.calted http://webcast.c http://www-visi http://www.slac	literature: s.org ch.edu cern.ch ualmedia.fnal.go c.stanford.edu	νV					
Course languag	ge:						
Notes:							
Course assessm Total number o	nent f assessed studer	nts: 7					
А	В	C	D	Е	FX		
71.43	28.57	0.0	0.0	0.0	0.0		
Provides: RND	r. Alexander Di	ner, CSc., Ing. Jo	zef Černák, PhĽ	D., RNDr. Františe	k Franko, PhD.		
Date of last modification: 11.02.2014							
Approved: prof	. RNDr. Stanisla	av Vokál, DrSc.					

University: P. J.	Šafárik Univer	sity in Košice					
Faculty: Faculty	of Science						
Course ID: ÚFV JADF/14	// Course n	Course name: Nuclear Physics					
Course type, sco Course type: Recommended Per week: Per Course methoo	ope and the mo course-load (study period: l: present	ethod: hours):					
Number of cred	its: 4						
Recommended	semester/trim	ester of the cours	e:				
Course level: II.							
Prerequisities: UÚFV/KTP1b/03	ÚFV/FEC1/04	and ÚFV/EJF1a/0	4 and ÚFV/FJA	1/14 and ÚFV/K	FP1a/03 and		
Conditions for a	course comple	tion:					
Learning outco	mes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	e:						
Notes:							
Course assessme Total number of	ent assessed stude	nts: 2					
Α	В	C	D	E	FX		
100.0	0.0	0.0	0.0	0.0	0.0		
Provides:		1	1				
Date of last mod	lification: 11.0	2.2014					
Approved: prof.	RNDr. Stanisl	av Vokál, DrSc.					

University: P. J. Šafárik University in Košice								
Faculty: Facult	y of Science							
Course ID: ÚF JRE1/14	V/ Course n	ame: Nuclear Re	actions					
Course type, sc Course type: 1 Recommended Per week: 2 Pe Course metho	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: 4							
Recommended	semester/trime	ster of the cours	e: 2.					
Course level: II	•							
Prerequisities:								
Conditions for Term project Examination	course complet	ion:						
Learning outco Introduction to	mes: nuclear reaction	S.						
Brief outline of Introduction to Mechanism of nuclear reaction approximation. Neutron physic synthesis. Fusic in medicine.	the course: nuclear reaction nuclear reaction ns, compound r Pre-compound r s. Neutron indu on in the Sun and	s. Conservation 1 s. Direct nuclear nucleus. Plane w nodel of nuclear r nced reactions. H l Stars, carbon cy	aws, kinematics, reactions. Resonave Born approx reactions: cassade leavy ion reaction rele, proton cycle	cross section, so nance reactions. ximation. Distor e model, exciton ons. Gamma rea e. Application of	cattering theory. Bohr model of rted wave Born model, fireball. actions. Nuclear nuclear physics			
Recommended 1. Bertulani C.A 2. G. McCracke 3. P.A.Tipler, R	 Recommended literature: 1. Bertulani C.A., Danielewicz P.: Introduction to nuclear reaction, IOP Publish. Ltd., 2004. 2. G. McCracken, P. Stott: Fusion, The Energy of the Universe, Elsevier 2005 3. P.A.Tipler, R.A.Llewellyn: Modern Physics. 6th Edition W H Freeman and Company 2012. 							
Course language: slovak and english								
Notes:								
Course assessment Total number of assessed students: 13								
A B C D E FX								
61.54 30.77 0.0 7.69 0.0 0.0								
Provides: RNDr. Janka Vrláková, PhD.								
Date of last mo	Date of last modification: 11.02.2014							

University: P. J.	. Šafárik Univer	sity in Košice					
Faculty: Faculty	y of Science						
Course ID: Dek UPJŠ/PPZ/13	x. PF Course n on a Labo	PF Course name: Personality Development and Key Competences for Success on a Labour Market					
Course type, sc Course type: H Recommended Per week: Per Course metho	ope and the me Practice d course-load (l r study period: d: present	thod: nours): 14s					
Number of crea	lits: 2						
Recommended	semester/trime	ster of the cours	e: 1., 3.				
Course level: II	•						
Prerequisities:							
Conditions for	course complet	ion:					
Learning outco	mes:						
Brief outline of	the course:						
Recommended	literature:						
Course languag	ge:						
Notes:							
Course assessm Total number of	Course assessment Total number of assessed students: 39						
А	В	C	D	E	FX		
100.0	100.0 0.0 0.0 0.0 0.0						
Provides: RNDr. Peter Stefányi, PhD.							
Date of last modification: 17.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J. Ša	fárik Univers	ity in Košice				
Faculty: Faculty of	Science					
Course ID: ÚFV/ FJA1/14	Course na	ame: Physics of t	he Nucleus			
Course type, scope Course type: Lect Recommended co Per week: 2 Per s Course method: p	e and the met ture ourse-load (h tudy period: oresent	thod: ours): 28				
Number of credits	: 4					
Recommended sen	nester/trimes	ster of the cours	e: 1.			
Course level: II.						
Prerequisities:						
Conditions for cou	rse completi	on:				
Learning outcome	s:					
Brief outline of the Basic properties o density distribution of nuclei. Quadrup and isospin. Nuclea	e course: f nucleus. Nu of nuclear ma ole electric m ar forces. Ten	uclear masses, bi atter. Nuclear mor omentum. Theor sor character of r	inding energy, mentum and par y of deuteron. T nuclear forces.M	nuclear stability. ity. Spin and magr Theory of scatterin Iodels of atomic r	Nuclear radius, netic momentum ng. Nuclear spin nucleus.	
Recommended lite Preston M.A., Phy	rature: sics of the Nu	ucleus, Addison-	Wesley Publish	ing Company, 196	52	
Course language:						
Notes:						
Course assessment Total number of as	t sessed studen	ts: 40				
A	В	С	D	E	FX	
62.5	62.5 15.0 7.5 10.0 5.0 0.0					
Provides: doc. RN	Dr. Jozef Urb	án, CSc.			-	
Date of last modifi	cation: 11.02	2.2014				
Approved: prof. R	NDr. Stanisla	v Vokál, DrSc.				
L			1			

University: P. J. Šafá	irik Univers	ity in Košice					
Faculty: Faculty of Science							
Course ID: ÚFV/ PFJ1/13	Course na	me: Programmin	ng and Data Proc	essing in Nuclea	r Physics I		
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 credits:	5						
Recommended seme	ester/trimes	ter of the course	e: 1.				
Course level: II.							
Prerequisities:							
Conditions for cour semestral project	se completi	on:					
Learning outcomes: To provide practical	cookbook o	f the object orien	ted programming	g in C++			
Brief outline of the of A practical introduct program development	course: tion to the v	world of the object	ct oriented progr	amming, subset	of the C++ and		
Program development. Recommended literature: 1. J.J. Barton, L.R. Nackman: Scientific and engineering C++, Addison Wesley, 1994 2. B. Kernigham, D. Ritchie: ANSI C 3. B. Eckel, Thinking in C++, 2nd ed., 2000 4. http://www.cplusplus.com/doc/tutorial							
Course language:							
Notes:							
Course assessment Total number of assessed students: 7							
A	В	С	D	E	FX		
71.43	71.43 0.0 28.57 0.0 0.0 0.0						
Provides: RNDr. Ivan Králik, CSc., RNDr. Marek Bombara, PhD.							
Date of last modification: 11.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J. Š	afárik Univers	ity in Košice					
Faculty: Faculty o	f Science						
Course ID: ÚFV/ PJF2/13	Course na	me: Programmir	ng and Data Pro	ocessing in Nuclea	ar Physics II		
Course type, scop Course type: Lec Recommended c Per week: 2 / 2 P Course method:	e and the met eture / Practice ourse-load (h er study perio present	hod: ours): od: 28 / 28					
Number of credits	s: 5						
Recommended set	mester/trimes	ter of the course	e: 2.				
Course level: II.							
Prerequisities:							
Conditions for co	urse completi	on:					
Learning outcome To teach the stud practical skills wit	es: ents how to a h object-orien	nalyse data using ted programming	g the ROOT fi language C++	ramework and he	lp them to gain		
Brief outline of the Basic description of and graphs, their of - trees, working w	e course: of ROOT envir reation and fit ith trees.	conment, work wi ting, data storing	ith the basic too into the struct	ols for data process ure suitable for an	sing: histograms alysis in ROOT		
Recommended litt 1. http://www.cplu 2. http://www-roo 3. http://root.cern.	erature: Isplus.com/doo t.fnal.gov/root ch/drupal/cont	c/tutorial/ /CPlusPlus/index ent/users-guide	html				
Course language:							
Notes:							
Course assessmen Total number of as	t ssessed studen	ts: 7					
A	В	С	D	Е	FX		
100.0	100.0 0.0 0.0 0.0 0.0						
Provides: RNDr. N	Aarek Bombar	a, PhD., RNDr. N	Marián Putiš, P	hD.	•		
Date of last modif	Date of last modification: 11.02.2014						
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J. Šafárik University in Košice						
Faculty: Faculty	of Science					
Course ID: KPPaPZ/PPZMg	g/12 Course na	ame: Psychology	and Health Psyc	hology (Mgr. stu	ıdy)	
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 cred	lits: 4					
Recommended	semester/trimes	ster of the cours	e: 2.			
Course level: I.,	II.					
Prerequisities:						
Conditions for a	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	e:					
Notes:						
Course assessm Total number of	Course assessment Total number of assessed students: 221					
Α	В	С	D	Е	FX	
19.91	19.91 25.79 25.34 12.67 15.84 0.45					
Provides: PhDr. Anna Janovská, PhD., PhDr. Karolína Barinková, PhD., Mgr. Lucia Hricová						
Date of last modification: 04.02.2014						
Approved: prof. RNDr. Stanislav Vokál, DrSc.						

University: P. J. Šafárik University in Košice						
Faculty: Faculty of	f Science					
Course ID: ÚFV/ KTP1a/03	Course na	me: Quantum Fi	eld Theory I			
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 1 Per study period: 42 / 14 Course method: present						
Number of credits	:: 6					
Recommended ser	mester/trimes	ster of the course	e: 1.			
Course level: II.						
Prerequisities:						
Conditions for con homeworks; their	urse completi presentation a	on: nd common analy	ysis of problem	under considerati	on, exam	
Learning outcome To offer basic know and phenomena in	es: vledges about i physical syste	modern trends an ems with infinite	d theoretical me degrees of freed	thods in descriptio	on of microword	
Conception of rela formalism. Symme fields - scalar, sp Gordon and Dirac Quantization of fr fields.	tivistic quantu etries and relations, electrom equations, Maree fileds. Bas	im field. Particle ed conservation la agnetic and vec axwell equations sic commutating	s as quantum flu aws for currents. tor. Equations f . Lagrangeans a and anticommu	uctuations of this Euler-Lagrange of for free classical nd Hamiltonians itating relatios fo	field. Lagrange equations. Basic fields - Klein- for these fields. or free quantum	
Recommended literature: Bogoljubov N.N., Širkov D.V.: Vvedenie v teoriu kvantovannych polej, Moskva, 1957 (prvé vydanie); Moskva, Nauka 1984 (4. Vydanie). Bjorken J.D., Drell S.D.: Relativistic quantum fields (dva diely), McGraw-Hill, New York, 1966. Feynmann R.P.: Photon-Hadron Interactions, Benjamin,New York, 1972; ruský preklad: Vzaimodejstvije fotonov s adronami. Mir. Moskva, 1975						
Course language: slovak and english						
Notes:						
Course assessmen Total number of as	Course assessment Total number of assessed students: 43					
A	В	С	D	E	FX	
60.47	20.93	6.98	4.65	6.98	0.0	
Provides: prof. RNDr. Michal Hnatič, DrSc., RNDr. Tomáš Lučivjanský, PhD.						
Date of last modification: 11.02.2014						

University: P. J	. Šafárik Univer	sity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚF KTP1b/03	V/ Course n	ame: Quantum F	ield Theory II		
Course type, sc Course type: 1 Recommended Per week: 3 / 1 Course metho	ope and the me Lecture / Practic d course-load (l Per study per d: present	ethod: e nours): iod: 42 / 14			
Number of cree	lits: 6				
Recommended	semester/trime	ester of the cours	e: 2.		
Course level: II	•				
Prerequisities:	ÚFV/KTP1a/03				
Conditions for homeworks, the	course complete eir presentation	ion: and common anal	ysis of the prob	lem under conside	eration; exam
Learning outco To offer basic ki and phenomena	mes: nowledges about in physical sys	t modern trends an tems with infinite	d theoretical me degrees of free	thods in description	on of microword
Interacting field Lagrange opera calculation of S the proton on divergences of	ds. The princip ator in QED. S S - matrix. S - r electron cross s the Feynman gra	le of symmetry a – matrix. Wick matrix and cross ection calculation aphs. Running cou	theorems and section of the p in in QCD fram upling constant.	f interactions of Feynman diagrar processes. Compt e. Radiation corr	quantum fields. ns. Perturbative con scattering of rections and the
Recommended Bogoljubov N.I vydanie); Mosk Itzykon C., Zub Icikon K., Zjub Mir, Moskva, 1 Ryder L.H.: Qu preklad: Rajder	literature: N., Širkov D.V.: va, Nauka 1984 er J.B.: Quantur er Z.B.: Kvanto 984. antum field theo L.: Kvantovaja	Vvedenie v teoriu (4. Vydanie) n field theory,Mc vaja teoria polja, ory, Cambridge Un teoria polja, Mir,	i kvantovannyc Graw-Hill, New niversity Press, Moskva, 1987.	h polej, Moskva, v York, 1986; rusl 1985; ruský	1957 (prvé ký preklad:
Course languages slovak and engli	ge: ish				
Notes:					
Course assessm Total number o	ent f assessed stude	nts: 40			
А	В	С	D	Е	FX
57.5	27.5	7.5	2.5	5.0	0.0
Provides: prof.	RNDr. Michal H	Inatič, DrSc., RN	Dr. Tomáš Luči	vjanský, PhD.	<u>.</u>

Date of last modification: 11.02.2014

University: P. J.	Šafárik Univers	ity in Košice					
Faculty: Faculty	of Science						
Course ID: ÚFV RJF1/14	Course ID: ÚFV/ Course name: Relativistic Nuclear Physics RJF1/14						
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 credi	its: 4						
Recommended s	emester/trimes	ster of the course	e: 2.				
Course level: II.							
Prerequisities:							
Conditions for c	ourse completi	on:					
Learning outcom Introduction to n	nes: uclear interactio	ons at relativistic	energies.				
Basic parametres invariants, rapidi energy threshold thermal and tran collisions. The e	s and quantities ity and light co s, the velocity of sverse spectra, quation of state	s of particle coll ne variables. Bas or sound, cross se collision volume. for nuclear matte	isions at high ic parametres ections, spectat Glauber mode r. The quark-g	energies. Relativit of high energy nu- tors and participan el for hadron-nucl luon plasma.	stic kinematics, clear collisions, its, temperature, eus and nuclear		
Recommended I Lovhoiden G.: H Chenk-Yin Wong Nikitin Ju.P., Roz	iterature: feavy Ion Collis g: Introduction t zental' I.L.: Jade	ions at High Ener to High-Energy H ernaja fizika vyso	rgies, Skriptá, (Ieavy Ion Colli kych energij N	Oslo-Bergen, 1996 sions, World Scier loskva, Atomizdat	5. ntific, 1994. ., 1980.		
Course language	2.						
Notes:							
Course assessme Total number of	ent assessed studen	ts: 21					
А	В	С	D	E	FX		
47.62	47.62 19.05 19.05 0.0 14.29 0.0						
Provides: doc. R	NDr. Jozef Urb	án, CSc.		•	•		
Date of last mod	ification: 11.02	2.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J. Šafá	rik University in Košice	2					
Faculty: Faculty of S	cience						
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	Course ID: ÚTVŠ/ Course name: Seaside Aerobic Exercise ÚTVŠ/CM/13						
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	nd the method: ce rse-load (hours): udy period: 504 esent						
Number of credits: 2							
Recommended seme	ster/trimester of the co	ourse:					
Course level: I., II.							
Prerequisities:							
Conditions for cours	e completion:						
Learning outcomes:							
Brief outline of the c	ourse:						
Recommended litera	ture:						
Course language:							
Notes:							
Course assessment Total number of asses	ssed students: 7						
	abs n						
57.14 42.86							
Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.							
Date of last modification: 15.01.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚFV PFC1/03	Course na	ame: Selected To	opics from Elem	entary Particle Ph	ysics
Course type, sco Course type: L Recommended Per week: 2 Pe Course method	ppe and the met ecture course-load (h r study period: l: present	thod: ours): 28			
Number of cred	its: 4				
Recommended s	semester/trimes	ster of the cours	se: 3.		
Course level: II.					
Prerequisities: (JFV/FEC1/04				
Conditions for c 2 x test Examination	ourse completi	on:			
Learning outcor Unified descript to nuclear and nu	nes: ion of processes acleon substruct	in nuclear and p oures - to the qua	article physics a rks.	nd selected experi	iments that lead
Brief outline of a Nucleon-nucleon formfactor. Elas scattering and the quarks and gluon Resonances. Bar	the course: in interactions at tic scattering one structure of ons and strong yons and meson	high and relativ f electrons on n particles. Scaling interaction. Parti	istic energies. G ucleons, formfa g and the parton icle production	eometric shape of ctor of nucleons. n model. Quark n in electron - posi	nuclei, nuclear Deep inelastic nodel, coloured tron collisions.
Recommended I Perkins D.H.: In Martin B., Shaw Martin B.R.: Nu Povh, Rith, Scho Berlin, 1993. Ryder L.H.: Eler	iterature: troduction to his G.: Particle Phy clear and Partic olz, Zetsche: Par nentary particle	gh energy physic ysics, Wiley, 200 le Physics, Wiley ticles and Nucle s and symmetrie	es, Cambridge, 2 98. 9, 2006. i, An Introductio s, Routledge, 19	000. on to the Physical 75.	Concepts,
Course language slovak and engli	e: sh				
Notes:					
Course assessme	ent	te: 15			
A	B	C	D	Е	FX
53.33	20.0	13.33	6.67	6.67	0.0
Provides: RNDr.	Adela Kravčák	tová, PhD.	<u> </u>	<u> </u>	

Date of last modification: 11.02.2014

University: P. J.	Šafárik Univers	sity in Košice					
Faculty: Faculty	Faculty: Faculty of Science						
Course ID: ÚF SPJFa/14	V/ Course n	ame: Semestral p	roject I				
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of cred	lits: 2						
Recommended	semester/trime	ster of the cours	e: 1.				
Course level: II							
Prerequisities:							
Conditions for Successful solut or in written for	course complet tion of tasks give m.	ion: en by the supervis	sor and presentati	on of the achieve	ed results orally		
Learning outco To learn the bas subnuclear phys	mes: sic problems and sics.	d methods of data	a processing and	data analysis in	the nuclear and		
Brief outline of To solve selecte	the course: d problems from	n nuclear and sub	nuclear physics.				
Recommended As recommende	literature: ed by the superv	isor					
Course languages slovak and engl	ge: ish						
Notes:							
Course assessment Total number of assessed students: 5							
А	В	C	D	Е	FX		
100.0 0.0 0.0 0.0 0.0 0.0							
Provides:							
Date of last modification: 11.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J.	Šafárik Univer	sity in Košice					
Faculty: Faculty of Science							
Course ID: ÚFV SPJFb/14	Course ID: ÚFV/ Course name: Semestral project II SPJFb/14						
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of cred	i ts: 6						
Recommended	semester/trime	ester of the cours	e: 2.				
Course level: II.							
Prerequisities:							
Conditions for o Successful solut orally or in writt	course complete ion of tasks give ten form.	tion: en by the supervis	sor and presentat	ion of the achiev	red results		
Learning outcome To learn the base subnuclear physic	mes: ic problems and ics.	l methods of data	processing and d	ata analysis in th	e nuclear and		
Brief outline of To solve selected	the course: d problems fror	n nuclear and sub	nuclear physics.				
Recommended As recommended	literature: d by the superv	visor.					
Course languag slovak and engli	e: sh						
Notes:							
Course assessment Total number of assessed students: 5							
А	В	C	D	Е	FX		
100.0 0.0 0.0 0.0 0.0							
Provides:							
Date of last modification: 11.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J.	Šafárik Univer	sity in Košice					
Faculty: Faculty of Science							
Course ID: ÚFV SPJFc/14	7/ Course n	ame: Semestral p	roject III				
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of cred	its: 6						
Recommended s	semester/trime	ster of the cours	e: 3.				
Course level: II.							
Prerequisities:							
Conditions for c Successful solut orally or in writt	course complet ion of tasks giv en form.	ion: en by the supervis	sor and presentat	ion of the achiev	red results		
Learning outcom To learn the basis subnuclear phys	mes: ic problems and ics.	methods of data	processing and d	ata analysis in th	e nuclear and		
Brief outline of To solve selected	the course: d problems from	n nuclear and sub	nuclear physics.				
Recommended As recommended	l iterature: d by the superv	isor.					
Course languag slovak and engli	e: sh						
Notes:							
Course assessment Total number of assessed students: 2							
Α	В	C	D	Е	FX		
100.0 0.0 0.0 0.0 0.0							
Provides:							
Date of last modification: 11.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J.	Šafárik Univers	ity in Košice				
Faculty: Faculty	y of Science					
Course ID: ÚF SEB1/04	: ÚFV/ Course name: Seminar from Nuclear Physics					
Course type, sc Course type: F Recommended Per week: 1 Pe Course method	ope and the met Practice I course-load (h er study period: d: present	thod: ours): 14				
Number of cred	lits: 1					
Recommended	semester/trimes	ster of the cours	e: 1.			
Course level: II						
Prerequisities:						
Conditions for a	course completi	on:				
Learning outco To bring the top	mes: bical problems, m	nethodics and too	ls of high energy	physics to the st	tudents.	
Brief outline of Department sem	the course: ninar - selected to	opical problems of	of the nuclear and	d subnuclear phy	sics.	
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessment Total number of assessed students: 11						
А	В	С	D	Е	FX	
100.0 0.0 0.0 0.0 0.0						
Provides: doc. RNDr. Jozef Urbán, CSc.						
Date of last modification: 11.02.2014						
Approved: prof	. RNDr. Stanisla	v Vokál, DrSc.				

University: P. J.	Šafárik Univers	ity in Košice				
Faculty: Faculty	y of Science					
Course ID: ÚFV SEC1/04	We ID: ÚFV/ Course name: Seminar from Nuclear Physics //04					
Course type, sc Course type: P Recommended Per week: 1 Pe Course method	ope and the met Practice I course-load (h er study period: d: present	thod: ours): 14				
Number of cred	lits: 1					
Recommended	semester/trimes	ster of the cours	e: 2.			
Course level: II						
Prerequisities:						
Conditions for a	course completi	on:				
Learning outco To bring the top	mes: bical problems, m	nethodics and too	ls of high energy	physics to the st	tudents.	
Brief outline of Department sem	the course: ninar - selected to	opical problems of	of the nuclear and	d subnuclear phy	sics.	
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessment Total number of assessed students: 10						
A	В	С	D	Е	FX	
100.0 0.0 0.0 0.0 0.0						
Provides: doc. RNDr. Jozef Urbán, CSc.						
Date of last modification: 11.02.2014						
Approved: prof	. RNDr. Stanisla	v Vokál, DrSc.				

University: P. J.	Šafárik Univers	sity in Košice				
Faculty: Faculty	y of Science					
Course ID: ÚF SED1/04	se ID: ÚFV/ Course name: Seminar from Nuclear Physics /04					
Course type, sc Course type: F Recommended Per week: 1 Pe Course method	ope and the me Practice I course-load (h er study period: d: present	thod: nours): : 14				
Number of cred	lits: 1					
Recommended	semester/trimes	ster of the cours	e: 3.			
Course level: II						
Prerequisities:						
Conditions for	course completi	ion:				
Learning outco To bring the top	mes: vical problems, n	nethodics and too	ls of high energy	physics to the s	tudents.	
Brief outline of Department sem	the course: ninar - selected to	opical problems of	of the nuclear and	d subnuclear phy	rsics.	
Recommended	literature:			-		
Course languag	ge:					
Notes:						
Course assessm Total number of	ent f assessed studen	nts: 7				
А	В	С	D	Е	FX	
85.71 0.0 14.29 0.0 0.0 0.0						
Provides: doc. H	RNDr. Jozef Urb	án, CSc.		<u> </u>		
Date of last mo	dification: 11.02	2.2014				
Approved: prof	RNDr. Stanisla	v Vokál, DrSc.				
Approved. pror	. INTIDI. Stallista	iv vokal, DISC.				

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: KPPaPZ/SPVKE/07	Course ID: Course name: Social-Psychological Training of Coping with Critical Life Situations					
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: 2.					
Course level: II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes:						
Brief outline of the c	ourse:					
Recommended litera	ture:					
Course language:						
Notes:						
Course assessment Total number of asse	ssed students: 101					
abs	n	Z				
97.03	97.03 2.97 0.0					
Provides:	Provides:					
Date of last modification: 04.02.2014						
Approved: prof. RNDr. Stanislav Vokál, DrSc.						

University: P. J. Šafárik University in Košice							
Faculty: Faculty	of Sci	ience					
Course ID: ÚF SPJ1/99	V/ (Course na	me: Special Pra	ctice from Nucles	ar Physics		
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 cred	lits: 3						
Recommended	semest	ter/trimes	ster of the cours	e: 2.			
Course level: II	-						
Prerequisities:							
Conditions for written tests, me	course easurer	completi nents of e	on: xperimental tasks	s, written reports	of tasks		
Learning outco Practice in nucl tasks.	mes: ear phy	ysics – qu	antitative and qu	alitative analysis	s, selected detect	or methods and	
Brief outline of Introduction to using ethalon. A from their may halftimes.Semic experiment with	the co practi Activit ximal conduct h Hg tu	urse: ice. Quan y determi energy. E tor detecto ibe. Virtua	titative and qua nation of gamm Beta - spectrosco ors. Fine structure I laboratory of nu	litative analysis. a source.Identific ope. Determinat e of the alpha spe aclear physics.	Gamma source cation of unknow ion of short live ectrum of Am-24	e identification wn beta source /ed radioisotop 11.Franck-Hertz	
Recommended 1. J.Vrláková, S na : http://www. 2. W.R.Leo: Tec	literat .Vokál upjs.sk chnique	t ure: : Základné k/public/m es for Nuc	é fyzikálne prakti ledia/5596/Zakla lear and Particles	kum, skriptá PF dne-fyzikalne-pr s Physics Experir	UPJŠ, Košice, 20 aktikum-III.pdf nents, Springer-V	012, dostupné Verlag,1994	
Course languag slovak	ge:						
Notes:							
Course assessm Total number of	Course assessment Total number of assessed students: 9						
А		В	С	D	Е	FX	
88.89 11.11 0.0 0.0 0.0 0.0							
Provides: RND	: Janka	a Vrláková	i, PhD.				
Date of last mo	dificat	ion: 11.02	.2014				
Approved: prof. RNDr. Stanislav Vokál, DrSc.							

University: P. J.	. Šafárik Univers	sity in Košice						
Faculty: Faculty	y of Science							
Course ID: ÚF TRS/03	Course ID: ÚFV/ Course name: Special Theory of Relativity rRS/03							
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: 3							
Recommended	semester/trime	ster of the cours	e: 1.					
Course level: I.	, II.							
Prerequisities:	ÚFV/TEP1/03							
Conditions for Final examinati	course complet on	ion:						
Learning outco To acquaint stu	mes: dents with princi	ples of a special t	heory of relativit	y.				
Galilean transf experiment. Eir physical conseq apparatus of spe	The course: Formation and (Istein's principle uences. Interval for a course of the co	Galilean principl s of the special th and light cone. Pro- elativistic electro	e of relativity. eory of relativity oper time. Minko dynamics. Relati	Ether's hypothe 2. Lorentz transfor- wski's space-time wistic mechanics	esis. Michelson ormation and its e. Mathematical s.			
Recommended 1. Greiner W.: C 2004. 2. Goldstein H., 3. Landau L.D.,	 Recommended literature: 1. Greiner W.: Classical Mechanics-Point Particles and Relativity, Springer-Verlag, New York, 2004. 2. Goldstein H., Poole Ch., Safko J.: Classical Mechanics, Addison Wesley, San Francisco, 2002. 3. Landau L. D., Lifšic F. M.: The Classical Theory of Fields, Pergamon Press, Oxford, 1975. 							
Course languag 1. Slovak, 2. English	ge:							
Notes:								
Course assessm Total number of	ent f assessed studer	nts: 158						
A	В	C	D	Е	FX			
51.9	51.9 22.78 13.29 6.33 5.06 0.63							
Provides: prof.	Provides: prof. RNDr. Andrej Bobák, DrSc.							
Date of last mo	dification: 31.0	1.2014						
Approved: prof	. RNDr. Stanisla	v Vokál, DrSc.						
L),							

University: P. J. Šafá	University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science				
Course ID: ÚTVŠ/ TVa/11	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 credits: 2	2			
Recommended seme	ster/trimes	ster of the course: 1.		
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	e completi	on:		
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language:				
Notes:				
Course assessment Total number of assessed students: 7160				
abs		n	neabs	
88.42 7.82 3.76				
Provides: PaedDr. Imrich Staško, doc. PhDr. Ivan Šulc, CSc., doc. Mgr. Rastislav Feč, PhD., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško				
Date of last modification: 15.01.2014				

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: ÚTVŠ/ TVb/11	Course name: Sports Activities II.				
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 credits: 2	2				
Recommended seme	ster/trimes	ster of the course: 2.			
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	se completi	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ature:				
Course language:					
Notes:					
Course assessment Total number of assessed students: 6364					
abs	abs n neabs				
84.95 11.06 3.99					
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., Mgr. Peter Bakalár, PhD., PaedDr. Milena Švedová, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško					
Date of last modification: 15.01.2014					

University: P. J. Šafá	University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science					
Course ID: ÚTVŠ/ TVc/11	se ID: ÚTVŠ/ Course name: Sports Activities III.				
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 credits: 2	2				
Recommended seme	ster/trimes	ster of the course: 3.			
Course level: I., I.II.,	II.				
Prerequisities:					
Conditions for cours	e completi	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language:					
Notes:					
Course assessment Total number of assessed students: 4191					
abs n neabs					
89.91 4.72 5.37					
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, doc. PaedDr. Ivan Uher, PhD., PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško					
Date of last modification: 15.01.2014					

University: P. J. Šafárik University in Košice				
Faculty: Faculty of S	Faculty: Faculty of Science			
Course ID: ÚTVŠ/ TVd/11	Š/ Course name: Sports Activities IV.			
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 credits: 2	2			
Recommended seme	ster/trimes	ster of the course: 4.		
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	e completi	on:		
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment Total number of assessed students: 3363				
abs		n	neabs	
86.14 6.78 7.08				
Provides: PaedDr. Imrich Staško, doc. Mgr. Rastislav Feč, PhD., doc. PhDr. Ivan Šulc, CSc., Mgr. Ivan Matúš, PhD., Mgr. Zuzana Küchelová, PaedDr. Milena Švedová, PhD., Mgr. Peter Bakalár, PhD., doc. PaedDr. Ivan Uher, PhD., Mgr. Agata Horbacz, PhD., Mgr. Marek Valanský, Mgr. Dávid Kaško				
Date of last modification: 15.01.2014				

University: P. J.	Šafárik Univer	sity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚFV SVKJ/99	Course name: Student Scientific Conference				
Course type, sco Course type: Recommended Per week: Per Course methoo	ope and the mo course-load (study period: present	ethod: hours):			
Number of cred	lits: 4				
Recommended	semester/trime	ester of the cours	e: 2.		
Course level: II.					
Prerequisities:					
Conditions for Contribution to	course complet Student Scienti	t ion: fic Conference			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	e:			-	
Notes:					
Course assessm Total number of	ent `assessed stude	nts: 20			
А	В	C	D	E	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides:					
Date of last mo	dification: 11.0	2.2014			
Approved: prof.	RNDr. Stanisl	av Vokál, DrSc.			

University: P. J. Šafárik University in Košice				
Faculty: Faculty of Science				
Course ID: ÚTVŠ/ LKSp//13	Course name: Summer Course-Rafting of TISA River			
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present			
Number of credits: 2				
Recommended seme	ster/trimester of the cours	e:		
Course level: I., II.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language:				
Notes:				
Course assessment Total number of assessed students: 63				
abs n				
41.27 58.73				
Provides: Mgr. Peter Bakalár, PhD.				
Date of last modification: 15.01.2014				
Approved: prof. RNDr. Stanislav Vokál, DrSc.				

University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: ÚTVŠ/ KP/12	Course ID: ÚTVŠ/ Course name: Survival Course IP/12 Course name: Survival Course				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 36 Per study period: 504 Course method: present					
Number of credits: 2					
Recommended seme	ster/trimester of the cours	2:			
Course level: I., II.					
Prerequisities:					
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:	Course language:				
Notes:					
Course assessment Total number of assessed students: 185					
abs n					
41.62 58.38					
Provides: Mgr. Marek Valanský					
Date of last modification: 15.01.2014					
Approved: prof. RNDr. Stanislav Vokál, DrSc.					

University: P. J	University: P. J. Šafárik University in Košice						
Faculty: Facult	Faculty: Faculty of Science						
Course ID: KPPaPZ/UPR/0	Course na	Course name: The Art of Aiding by Verbal Exchange					
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 crea	lits: 2						
Recommended	semester/trimes	ster of the cours	e: 4.				
Course level: II	•						
Prerequisities:							
Conditions for	course completi	on:					
Learning outco	omes:						
Brief outline of	the course:						
Recommended	literature:						
Course language:							
Notes:							
Course assessment Total number of assessed students: 47							
А	B C D E FX						
87.23	4.26	2.13	2.13	0.0	4.26		
Provides: Mgr. Ondrej Kalina, PhD.							
Date of last modification: 04.02.2014							
Approved: prof. RNDr. Stanislav Vokál, DrSc.							
University: P. J. Šafárik University in Košice							
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Faculty: Faculty of Science							
Course ID: ÚFV VOM/09	V/ Course name: The Universe at Microscopic Level						
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 cred	Number of credits: 3						
Recommended	semester/trime	ster of the course	e: 3.				
Course level: II.							
Prerequisities:							
Conditions for course completion:							
Learning outcomes: To provide the students with the recent knowledge of the structure of the Universe at the elementary particle level.							
Brief outline of the course: The lectures provide an insight into the microstructure of the Universe - starting with early cosmic phases like quark-gluon plasma, baryogenesis and first nuclei creation and continue with the structure of nowadays Universe: main sequence stars, white dwarfs, neutron stars, black holes, interstellar and inter galactic space, dark matter and dark energy and cosmic rays.							
 Recommended literature: 1. D. Griffiths: Introduction to Elementary Particles, Wiley-VCH, Weinheim, 2004 2. D. Perkins: Particle Astrophysics, Oxford University Press, Oxford, 2003 3. D. Prialnik: An Introduction to the Theory of Stellar Structure and Evolution, Cambridge University Press, Cambridge, 2000 							
Course language:							
Notes:							
Course assessment Total number of assessed students: 13							
А	В	C	D	E	FX		
100.0	0.0	0.0	0.0	0.0	0.0		
Provides: RNDr. Marek Bombara, PhD.							
Date of last modification: 11.02.2014							
Approved: prof	Approved: prof. RNDr. Stanislav Vokál, DrSc.						

University: P. J. Šafárik University in Košice					
Faculty: Faculty	Faculty: Faculty of Science				
Course ID: ÚF CUVE/13	V/ Course name: Ultra High Energy Particles				
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 cred	lits: 3				
Recommended	semester/trimes	ster of the cours	e: 1.		
Course level: II					
Prerequisities:					
Conditions for	course completi	on:			
The goal of the subject is to introduce the students to the physical matters of the high (over 10^15 eV) and ultra high (over 4.10^19 eV) cosmic rays. The lectures will concern the history of their observation, the principal of measurement, actual and future experiments, especially JEM-EUSO experiment (the first space-based experiment, which will observe from the International Space Station). The final lectures will review the principles of their propagation and acceleration in galactic and intergalactic space and discuss possible sources of origin.					
Brief outline of the course:					
Recommended literature: Cosmic rays at Earth, P.K.F. Grieder, Elsevier Science B.V. 2001 Extensive Air Showers, P.K.F. Grieder, Springer-Verlag Berlin Heidelberg 2010 The JEM-EUSO mission, New Journal of Physics, Volume 11, Issue 6, pp. 065009, 2009 Web: http://jemeuso.riken.jp Ultra High Energy Cosmic Rays: origin and propagation, Todor Stanev, ICRC'07 Merida Origin and Propagation of Extremely High Energy Cosmic Rays, P.Bhattacharjee, arXiv:astro- ph/9811011					
Course language:					
Notes:					
Course assessment Total number of assessed students: 1					
А	В	С	D	Е	FX
100.0	0.0	0.0	0.0	0.0	0.0
Provides: RNDr. Pavol Bobik, PhD., RNDr. Marián Putiš, PhD., RNDr. Blahoslav Pastirčák, CSc.					
Date of last mo	dification: 11.02	2.2014			
Approved: prof	Approved: prof. RNDr. Stanislav Vokál, DrSc.				

University: P. J. Šafá	rik University in Košic	e	
Faculty: Faculty of S	cience		
Course ID: ÚTVŠ/ ZKLS//13	Course name: Winter Ski Training Course		
Course type, scope a Course type: Practic Recommended cour Per week: 36 Per st Course method: pre	nd the method: ce rse-load (hours): udy period: 504 esent		
Number of credits: 2			
Recommended semester/trimester of the course:			
Course level: I., II.			
Prerequisities:			
Conditions for course completion:			
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended literature:			
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 59		
	abs		n
	25.42		74.58
Provides: PaedDr. Im	rich Staško, doc. PhDr	. Ivan Šulc, CSc.	
Date of last modifica	tion: 15.01.2014		
Approved: prof. RNI	Dr. Stanislav Vokál, Dr	Sc.	

University: P. J. Šafá	rik University in Košic	;	
Faculty: Faculty of S	cience		
Course ID: D PrávF/ZP2/11	Course name: Základy práva pre prirodovedcov II		
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: 4			
Recommended seme	ster/trimester of the c	ourse:	
Course level: II.			
Prerequisities:			
Conditions for cours	e completion:		
Learning outcomes:			
Brief outline of the c	ourse:		
Recommended litera	iture:		
Course language:			
Notes:			
Course assessment Total number of asses	ssed students: 95		
	abs	n	
	97.89	2.11	
Provides:			
Date of last modifica	tion: 14.01.2014		
Approved: prof. RNI	Dr. Stanislav Vokál, Dr.	bc.	