University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of Science					
Course ID: ÚINF/ OPSP/14	Course name: ABAP and Object and Dialogue Programming				
Course type, scope a Course type: Lectur Recommended cou Per week: 3 / 1 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 42 / 14 esent				
Number of credits: 5					
Recommended seme	ster/trimester of the cou	rse: 2.			
Course level: I., II., N	N				
Prerequisities: ÚINF	/RASP/14 or ÚINF/RAS	2/16			
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c Screen, function code	ourse: es, local and global classe	s, inheritance, polymorphism.			
Recommended litera	ature:				
Course language:					
Notes:					
Course assessment Total number of asse	ssed students: 26				
	abs n				
61.54 38.46					
Provides:					
Date of last modifica	ition: 03.05.2015				
Approved: prof. RNI	Dr. Katarína Cechlárová, l	DrSc.			

University: P. J. Š	Safárik Univers	ity in Košice				
Faculty: Faculty	of Science					
Course ID: KFaD AFS/05	DF/ Course na	me: Ancient Ph	ilosophy and Pre	esent Times		
Course type, scop Course type: Pra Recommended o Per week: 2 Per Course method:	pe and the met actice course-load (h study period: present	thod: ours): 28				
Number of credit	ts: 2					
Recommended se	emester/trimes	ster of the cours	e: 2.			
Course level: II.						
Prerequisities:						
Conditions for co	ourse completi	on:				
Learning outcom	ies:					
Brief outline of tl	he course:			-		
Recommended li	terature:					
Course language	:					
Notes:						
Course assessmen Total number of a	nt issessed studen	ts: 30				
A	В	С	D	E	FX	
83.33 6.67 6.67 0.0 3.33 0.0						
Provides: Doc. Pl	nDr. Peter Nezi	ník, CSc.	<u>I</u>	··		
Date of last modi	fication: 03.05	5.2015				
Approved: prof. 1	RNDr. Katarína	a Cechlárová, Dr	Sc.			

University: P. J.	. Šafárik Univer	sity in Košice					
Faculty: Faculty	y of Science						
Course ID: ÚM ALA/10	Course ID: ÚMV/ Course name: Applied linear algebra						
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: 5						
Recommended	semester/trime	ster of the cours	e: 1., 3.				
Course level: II	•						
Prerequisities:							
Conditions for According to te	course complet sts and to the ex	ion: am.					
Learning outco To obtain basic	mes: knowledge on l	inear algebra; to b	be able to apply t	he theory in conc	rete excercises.		
Brief outline of Matrices over Jordan normal pseudoinverse r	the course: Euclidean rin form. Function natrices and the	gs, canonical fo s of matrices, se ir application.	orms. Polynomi quences, series.	al matrices. Sir Inversion of sin	nilar matrices. Igular matrices,		
Recommended H.E.Rose: Line D.Serre: Matric http://www.cs.u	literature: ar Algebra, A Pres, Theory and a t.ee/~toomas_1/2	ure Mathematical applications, Sprin inalg/	Approach, Birkl 1ger Verlag, 2002	näuser Verlag, 20 2.	02.		
Course languag Slovak	ge:						
Notes:							
Course assessment Total number of assessed students: 42							
А	A B C D E FX						
33.33	33.33 7.14 26.19 4.76 28.57 0.0						
Provides: prof.	Provides: prof. RNDr. Danica Studenovská, CSc.						
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Katarína Cechlárová, DrSc.							

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚMV/ APS/10	Course name: Applied statistics					
Course type, scope a Course type: Lectur Recommended cour Per week: 3 / 2 Per Course method: pre	nd the method: e / Practice rse-load (hours): study period: 42 / 28 esent					
Number of credits: 6						
Recommended seme	ster/trimester of the course: 2.					
Course level: II.						
Prerequisities:						
Conditions for cours Given at the basis of partial examination, o	e completion: Statistical processing of real data. Final evaluation is given at the basis of computing part, and oral part of the exam.					
Learning outcomes: Learning most freque	ntly applied statistical methods.					
Brief outline of the c • Matrices and linear • Important distribution o Normal distribution o Hotelling's test • General linear model o Probability foundat o Model with full rand o Model with full rand o Model with incomp o Submodels testing • Regression analysis o Basic models o Assessing the quality • Analysis of variance o One-way ANOVA, o Balanced factorial randesign, Latin squaress o Hierarchical model • Analysis of covariant • Statistical software	ourse: spaces, g-inversions, projections ons and related distributions el ions of regression and correlation k lete rank y of a model e multiple comparison procedures, problem of heteroskedasticity nodels (two-way ANOVA with/without interactions, three-way ANOVA, BIB) s nce for linear modeling					
Recommended litera • Rao: Linear statistic • Seber: Linear regres • Searle: Linear mode • Sen, Srivastava: Reg	ture: cal inference and its applications, Wiley, 1973 ssion analysis, Wiley, 1977 els, Wiley, 1997 gression analysis (Theory, Methods, and Applications), Springer, 1990					

• Christensen: Plane answers to complex questions (The Theory of Linear Models), Springer, 1987

Course language: Slovak								
Notes:								
Course assessment Total number of assessed students: 150								
А	В	B C D E FX						
3.33	3.33 12.67 22.0 18.0 25.33 18.67							
Provides: doc.	Provides: doc. RNDr. Ivan Žežula, CSc.							
Date of last modification: 03.05.2015								
Approved: pro	of. RNDr. Katarína	a Cechlárová, Dr	Sc.					

University: P. J. Šafárik University in Košice						
Faculty: Faculty of Science						
Course ID: ÚMV/ Course name: Banking BNK/10						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present						
Number of credits: 3						
Recommended semester/trimester of the course: 1., 3.						
Course level: II.						
Prerequisities:						
Conditions for course completion:						
Learning outcomes: To present the challenge of commercial banking. To teach students the basic knowledge and terms of commercial banking and the bank system in Slovakia. To familiarise them with the position, functions and role of the central bank, and with the position, functions and role of commercial banks.						
Brief outline of the course: Basic structure and philosophy of bank trading and of the bank as a unit. Bank reports. Basic principles of managing assets and liabilities. Bank loans and investments. The capital of bank. Payment connections.						
Recommended literature: 1.Horvátová: Bankovníctvo, Súvaha 2000, 2. Ziegler, k. a kol. Finanční řízení bánk Bankvní institut Praha 1997 3. Prno, I. Bankovníctvo, IRIS, 2000 4. Makúch, J.a kol. Komerčné banky, Elita, 1994 5. Šenkýřová: Bankovníctví I,II., 6. Gallo: Základy moderného bankovníctva						
Course language: Slovak						
Notes:						
Course assessment Total number of assessed students: 79						
A B C D E FX						
37.97 43.04 15.19 2.53 1.27 0.0						
Provides: Ing. Jozef Porvazník, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University in Košice
nce
ourse name: Combinatorial algorithms
the method: Practice ·load (hours): dy period: 42 / 14 nt
r/trimester of the course: 2.
ompletion:
nderstand the close tie between the theoretical and algorithmic aspects of I to show how algorithms can be extacted from theorems. Ability in proving
Se: Ims and complexity. Sorting algorithms. Search algorithms. Greedy eness. Generating all spanning trees of a graph. Minimum spanning tree problem. rtest path problem and its analogues. The most reliable path. The largest with the largest expected capacity. dians. on to networks, the max-flow min-cut theorem. Related problems. natchings in bipartite graphs. Maximum matchings in general graphs. nment problems. nese postman's problem.
re: ellermann: Applied and Algorithmic Graph Theory, McGraw-Hill, Inc. h Theory - An Algorithmic Approach, Academic Press, New York 1975 n 1978). s, Networks, and Algorithms, Springer-Verlag Berlin 2005. goritmy, Veda Bratislava 1983. Thulasiraman: Graphs, networks, and algorithms. John Wiley and Sons,

Slovak							
Notes:							
Course assessment Total number of assessed students: 85							
А	B C D E FX						
37.65	18.82	20.0	10.59	11.76	1.18		
Provides: prof. RNDr. Stanislav Jendrol', DrSc., Mgr. Juraj Valiska							
Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Katarína	Cechlárová, Dr	Sc.				

.

Faculty of Science Course ID: ÚMV/ KDZ/10 Course name: Combinatorial designs Course type, scope and the method: Course type: Lecture Course type: Lecture						
Course ID: ÚMV/ KDZ/10 Course name: Combinatorial designs Course type, scope and the method: Course type: Lecture Course type: Lecture						
Course type, scope and the method: Course type: Lecture						
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., 3.						
Course level: II.						
Prerequisities:						
Conditions for course completion: Based on results of oral exam.						
Learning outcomes: To present the basics of theory of combinatorial designs and their applications in sciences.						
Brief outline of the course: 2-designs, balanced designs. Symmetric designs, Hadamard matrices, finite projective planes. Steiner systems.						
Recommended literature: I. Anderson, I. Honkala: A short course in combinatorial designs, http://www.utu.fi/~honkala/ cover.html D.R. Stinson: Combinatorial Designs: Constructions and Analysis, Springer 2004 WD Wallis: Combinatorial designs, Marcel Dekker 1988						
Course language: Slovak or English						
Notes:						
Course assessment Total number of assessed students: 68						
A B C D E FX						
20.59 25.0 29.41 19.12 5.88 0.0						
Provides: doc. RNDr. Tomáš Madaras, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J. Šafá	rik University	y in Košice			
Faculty: Faculty of S	cience				
Course ID: KPPaPZ/KK/07	Course ID: Course name: Communication and Cooperation Cooperation				
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the metho ce rse-load (hou dy period: 2 esent	od: 1rs): 8			
Number of credits: 2					
Recommended seme	ster/trimeste	er of the course: 3.			
Course level: II.					
Prerequisities:					
Conditions for cours	e completior	1:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed students:	: 281			
abs	abs n z				
98.22 1.78 0.0					
Provides: Mgr. Ondro	ej Kalina, PhI).			
Date of last modifica	tion: 03.05.2	2015			
Approved: prof. RNI	Dr. Katarína C	Cechlárová, DrSc.			

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of Science						
Course ID: ÚMV/ VSM/10	Course name: Computational statistics and simulation methods					
Course type, scope a Course type: Lectur Recommended cour Per week: 2 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 28 / 28 esent					
Number of credits: 5						
Recommended seme	ster/trimester of the course: 3.					
Course level: II.						
Prerequisities:						
Conditions for cours Written tests. Final eve exam.	e completion: valuation is given at the basis of partial examination, computing part, and oral					
Learning outcomes:						
Getting to know mod	ern software and computational and simulation methods in statistics.					
Brief outline of the c • Types of statistical of • Some practical common o Computing distribution • Random numbers g o Uniform distribution • General methods for • Applications of random o Simulations • Approximate evalue • Bootstrap method • Random processes • Exploratory data and • Principles of cluster • GUHA method	ourse: computations, popular mathematical software putational methods tion and quantile functions ns eneration n (linear reccurent generators, bit reccurent generators, nonlinear generators) or other distributions r other distributions dom numbers ation of an integral and MCMC method alysis r analysis					
Recommended litera • Olehla, Věchet, Ole • Olver et al.: NIST H 2010 • Deák: Random num • Fishman: Monte Ca • Backhaus, Erichson • Tan, Steinbach, Kun	hture: hla: Řešení úloh matematické statistiky ve Fortranu, Nadas, 1982 Handbook of mathematical functions, NIST and Cambridge University Press, hber generators and simulation, Akadémiai kiadó, 1990 rlo. Concepts, Algorithms, and Applications., Springer, 1996 , Plinke, Weiber: Multivariate Analysemethoden, 7th ed., Springer, 1994 mar: Introduction to Data Mining, Pearson Education Ltd., 2014					

Course language: Slovak								
Notes:	Notes:							
Course assessment Total number of assessed students: 50								
А	В	B C D E FX						
16.0	6.0 12.0 24.0 24.0 22.0 2.0							
Provides: doc. RNDr. Ivan Žežula, CSc., RNDr. Daniel Klein, PhD.								
Date of last modification: 03.05.2015								
Approved: prof	f. RNDr. Katarína	u Cechlárová, Dr	Sc.					

University: P. J. Ša	afárik Univers	ity in Košice			
Faculty: Faculty of	f Science				
Course ID: ÚMV/ TSS/10	V/ Course name: Control theory				
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	s : 6				
Recommended ser	mester/trimes	ter of the course	e: 1., 3.		
Course level: II.					
Prerequisities:					
Conditions for cou Based on two write	urse completion ten tests during	on: g the semester an	d on the oral exa	amination.	
Learning outcome To learn the basic	es: notions of con	trollable systems			
Brief outline of the Controllable system controls Discrete applications of the	e course: ns. Pontrjagin e systems, dyn oretical results	maximum princi namic programm	ple. Linear syste ing, Bellmann's	ems, bang-bang co s optimality prin	ontrols, singular ciple. Practical
 Recommended literature: 1. K. Macki, A. Strauss: Introduction to Optimal Control Theory, Springer, 1980. 2. G. Feichtinger, R.F. Hartl: Optimale Kontrolle okonomischer Prozesse, Berlin, 1986. 					
Course language: Slovak					
Notes:	Notes:				
Course assessment Total number of assessed students: 125					
A	В	С	D	Е	FX
25.6	27.2	20.8	17.6	8.8	0.0
Provides: prof. RN	Provides: prof. RNDr. Katarína Cechlárová, DrSc.				
Date of last modification: 03.05.2015					
Approved: prof. R	Approved: prof. RNDr. Katarína Cechlárová, DrSc.				

University: P. J. Sa	fárik Univers	ity in Košice							
Faculty: Faculty of	Science								
Course ID: ÚINF/ DBS/15	Course na	me: Database sy	stems for Mathe	maticians					
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present									
Number of credits	: 6								
Recommended sen	nester/trimes	ster of the course	e : 3.						
Course level: II.									
Prerequisities:									
Conditions for cou	rse completi	on:							
Learning outcome Acquired basic con	s: cepts and tec	hniques of relatio	nal database the	ory and correspon	nding software.				
Data models. Lang and integrity cons Nested queries and modelling. Functio	guages for de traints. Quer several table nal dependen	efining and mani- ies: select, wher s: join, union, pri- cy and normaliza	ipulating data (e, group by, ag imary, foreign k tion.	DDL, DML). Ta ggregate and sys ey. Relational alg	Brief outline of the course: Data models. Languages for defining and manipulating data (DDL, DML). Tables, attributes and integrity constraints. Queries: select, where, group by, aggregate and system functions. Nested queries and several tables: join, union, primary, foreign key. Relational algebra. Database modelling. Functional dependency and normalization.				
 Recommended literature: S. Krajčí: Databázové systémy, UPJŠ, 2005 2. J. Date C.J., Database Design and Relational Theory, O'Reilly, 2012 Atkinson, P., Vierra, R., BEGINNING MICROSOFT SQL SERVER 2012 PROGRAMMING, John Wiley - Wrox, 2012 Itzik Ben-Gan, Microsoft SQL Server, 2012 T-SQL Fundamentals, O'Reilly, 2012 L. Davidson, J.M. Moss, Pro SQL Server 2012 Relational database Design and Implementation, APRESS, 2012 									
 S. Krajčí: Databáz Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 	zové systémy se Design and ra, R., BEGI , 2012 icrosoft SQL . Moss, Pro S	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I	ry, O'Reilly, 201 SOFT SQL SER QL Fundamenta Relational databa	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir	GRAMMING, 2 nplementation,				
 S. Krajčí: Databáz Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 	zové systémy se Design and ra, R., BEGI , 2012 icrosoft SQL . Moss, Pro S	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I	ry, O'Reilly, 201 SOFT SQL SER QL Fundamenta Relational databa	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir	GRAMMING, 2 nplementation,				
 S. Krajčí: Databáz Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: 	zové systémy se Design and ra, R., BEGI , 2012 icrosoft SQL . Moss, Pro S	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I	ry, O'Reilly, 201 SOFT SQL SER QL Fundamenta Relational databa	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir	GRAMMING, 2 nplementation,				
 S. Krajčí: Databáz Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of ass 	zové systémy se Design and ra, R., BEGIN , 2012 icrosoft SQL Moss, Pro S	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I	ry, O'Reilly, 201 SOFT SQL SER QL Fundamenta Relational databa	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir	GRAMMING, 2 nplementation,				
 S. Krajčí: Databáz Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of ass A	zové systémy se Design and ra, R., BEGIN , 2012 icrosoft SQL Moss, Pro S	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I ts: 674 C	D	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir	FX				
 S. Krajčí: Databá: Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of ass A 12.46 	zové systémy se Design and ra, R., BEGIN , 2012 icrosoft SQL Moss, Pro S sessed studen B 8.9	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I ts: 674 C 11.87	D 20.47	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir E 35.46	FX 10.83				
 S. Krajčí: Databá: Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of ass A 12.46 Provides: doc. RNI	zové systémy se Design and ra, R., BEGIN , 2012 icrosoft SQL Moss, Pro S sessed studen B 8.9 Dr. Csaba Tör	, UPJS, 2005 2. J. I Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I ts: 674 C 11.87 ök, CSc.	D 20.47	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir E 35.46	FX 10.83				
 S. Krajčí: Databá: Date C.J., Databa Atkinson, P., Vier John Wiley - Wrox Itzik Ben-Gan, M L. Davidson, J.M APRESS, 2012 Course language: Notes: Course assessment Total number of ass A 12.46 Provides: doc. RNI Date of last modifi	zové systémy se Design and ra, R., BEGIN , 2012 icrosoft SQL Moss, Pro S sessed studen B 8.9 Dr. Csaba Tör cation: 03.05	, UPJS, 2005 2. J. 1 Relational Theo NNING MICROS Server, 2012 T-S QL Server 2012 I ts: 674 C 11.87 ök, CSc. 5.2015	D 20.47	2 VER 2012 PROG als, O'Reilly, 2012 ase Design and Ir E 35.46	FX 10.83				

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚMV/ DPP1a/14	Course ID: ÚMV/ DPP1a/14Course name: Diploma Project I			
Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present				
Number of credits: 1				
Recommended seme	ster/trimester of the cours	e: 2.		
Course level: II.				
Prerequisities:				
Conditions for cours	e completion:			
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	iture:			
Course language: Slovak	Course language: Slovak			
Notes:	Notes:			
Course assessment Total number of asses	ssed students: 90			
	abs	n		
	98.89 1.11			
Provides: doc. RNDr. Roman Soták, PhD.				
Date of last modification: 03.05.2015				
Approved: prof. RNDr. Katarína Cechlárová, DrSc.				

University: P I Šafá	University D. I. Čeféril: University in Kožico				
University. r. j. Sala					
Faculty: Faculty of S	Faculty: Faculty of Science				
Course ID: ÚMV/ DPP1b/14	Course ID: ÚMV/ Course name: Diploma Project II DPP1b/14				
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	nd the method: rse-load (hours): y period: esent				
Number of credits: 1					
Recommended seme	ster/trimester of the cours	se: 3.			
Course level: II.					
Prerequisities: ÚMV	/DPP1a/14				
Conditions for cours	e completion:				
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	ture:				
Course language: Slovak					
Notes:					
Course assessment Total number of asses	ssed students: 79				
	abs	n			
	98.73 1.27				
Provides: prof. RND	. Katarína Cechlárová, DrS	с.			
Date of last modifica	tion: 03.05.2015				
Approved: prof. RNI	Approved: prof. RNDr. Katarína Cechlárová, DrSc.				

University: P. J.	Šafárik Univers	sity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚM DPO/14	E ID: ÚMV/ Course name: Diploma thesis and its defence				
Course type, sc Course type: Recommended Per week: Per Course method	ope and the me l course-load (h · study period: d: present	thod: ours):			
Number of cred	lits: 20				
Recommended	semester/trime	ster of the cours	e:		
Course level: II	-				
Prerequisities:					
Conditions for a	course complet	ion:		_	
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag Slovak	ge:				
Notes:					
Course assessm Total number of	ent fassessed studer	its: 20			
А	В	С	D	Е	FX
35.0	40.0	20.0	0.0	0.0	5.0
Provides:					
Date of last mo	dification: 03.03	5.2015			
Approved: prof	. RNDr. Katarín	a Cechlárová, Dr	Sc.		

University: P. J.	. Šafárik Univers	sity in Košice			
Faculty: Faculty	y of Science				
Course ID: ÚM FAN/10	IV/ Course na	ame: Functional a	analysis		
Course type, sc Course type: I Recommended Per week: 3 / 1 Course metho	ope and the me Lecture / Practice d course-load (h l Per study peri d: present	thod: e nours): nod: 42 / 14			
Number of crea	lits: 6				
Recommended	semester/trime	ster of the cours	e: 2.		
Course level: II	•				
Prerequisities:					
Conditions for exam	course completi	ion:			
Learning outco Understanding	omes: of the basic rigor	rous ideas of App	lied Functional	Analysis.	
Brief outline of Linear spaces. spaces. Linear to of L(p) spaces. Closed graph th	the course: Algebraic base a topological space Hilbert space. <i>A</i> leorem. Hahn-Ba	and dimension. I e. Locally convex Applications of B mach theorem. Sp	Linear operators space. Norme Baire category t pectrum of linea	s and functionals. d space. L(p) space theorem. Open ma ar compact operate	Algebraic dual ces. Dual spaces apping theorem. or.
Recommended A. M. Bruckner	literature: , J. B. Bruckner,	B. S. Thomson:	Real Analysis,	Prentice Hall, 199	7.
Course languag Slovak or Engli	ge: sh				
Notes:					
Course assessme Total number of	ent f assessed studer	nts: 48			
А	В	C	D	E	FX
8.33	6.25	14.58	12.5	47.92	10.42
Provides: prof.	RNDr. Jozef Do	boš, CSc.			
Date of last mo	dification: 03.03	5.2015			
Approved: prof	. RNDr. Katarín	a Cechlárová, Dr	Sc.		
L					

University: P. J	. Šafárik Univers	ity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚM THR/10): ÚMV/ Course name: Game theory				
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 crea	dits: 6				
Recommended	semester/trimes	ster of the cours	e: 1., 3.		
Course level: II					
Prerequisities:					
Conditions for Two written exa examination.	course completi ams dring the ser	on: nester. The final	assessment is ba	ased on the writte	n tests and oral
Learning outco To learn the ba situations from	sic methods of g everyday life as	game theory. We simple games.	also require that	at students will be	e able to model
Brief outline of Examples of ga theory of utility games: core, Sh The students sh duality theory a	Brief outline of the course: Examples of games. Extensive form of a game, value of the game. Von Neumann Morgenstern theory of utility. Matrix games and their solution. Bimatrix games. Theory of negotiations. n-person games: core, Shapley value. Economic applications of game theory. The students should have basic knowledge in probability theory and linear programming (including duality theory and simpley method).				nn Morgenstern ations. n-person ning (including
 Recommended literature: 1. K. Binmore, Fun and games, D.C. Heath, 1992 2. M. Chobot, F. Turnovec, V. Ulašin, Teória hier a rozhodovania, Alfa, Bratislava, 1991. 3. G. Owen, Game Theory, Academic Press (existuje ruský preklad). 4. L.C. Thomas, Games, Theory and Applications, Wiley, New York. 5. H.S. Bierman, L.Fernandez, Game Theory with Economic Applications, Addison-Wesley, 1998. 					
Course languag Slovak	Course language: Slovak				
Notes:					
Course assessm Total number of	nent f assessed studen	ts: 112			
А	В	С	D	E	FX
17.86	22.32	17.86	24.11	16.96	0.89
Provides: prof.	RNDr. Katarína	Cechlárová, DrS	c.		

Date of last modification: 03.05.2015

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

University: P. J.	. Šafárik Univers	ity in Košice			
Faculty: Faculty	Faculty: Faculty of Science				
Course ID: KFa DF2p/03	aDF/ Course na	DF/ Course name: History of Philosophy 2 (General Introduction)			
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:		
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	ent f assessed studen	ts: 731			
А	В	С	D	Е	FX
60.6	13.82	12.72	8.76	3.42	0.68
Provides: doc. PhDr. Pavol Tholt, PhD., mim. prof., Doc. PhDr. Peter Nezník, CSc., PhDr. Katarína Mayerová, PhD., Mgr. Róbert Stojka, PhD.					
Date of last modification: 03.05.2015					
Approved: prof	Approved: prof. RNDr. Katarína Cechlárová, DrSc.				

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	y of Science				
Course ID: KFε KDF/05	DF/ Course name: Chapters from History of Philosophy of 19th and 20th Centuries (General Introduction)				
Course type, sc Course type: F Recommended Per week: 2 Pe Course method	ope and the met Practice 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: 2.		
Course level: II	•				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number of	ent f assessed studen	ts: 10			
А	В	С	D	Е	FX
50.0	20.0	10.0	0.0	10.0	10.0
Provides: doc. PhDr. Pavol Tholt, PhD., mim. prof.					
Date of last mo	dification: 03.05	5.2015			
Approved: prof	. RNDr. Katarína	a Cechlárová, Dr	Sc.		

University: P. J.	Šafárik Univers	ity in Košice			
Faculty: Faculty	of Science				
Course ID: KFa IH2/03	Ourse ID: KFaDF/ Course name: Idea Humanitas 2 (General Introduction) 2/03				
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	ster of the cours	e: 3.		
Course level: II.					
Prerequisities:					
Conditions for c	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	e:				
Notes:					
Course assessme Total number of	ent assessed studen	ts: 8			
A	В	С	D	Е	FX
87.5	12.5	0.0	0.0	0.0	0.0
Provides: Doc. PhDr. Peter Nezník, CSc.					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Katarína Cechlárová, DrSc.					

University: P. J.	. Šafárik Univer	sity in Košice				
Faculty: Faculty	y of Science					
Course ID: ÚM TIN/10	V/ Course n	V/ Course name: Information theory				
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	ester of the cours	e: 1., 3.			
Course level: II	·					
Prerequisities:						
Conditions for A student is eva chosen by him/l at maximum). H 50-59 p., FX	Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A and one from the group B (both for 50 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p. FX 0-49 p.					
Learning outco A student gets a	mes: cquainted with a	mathematical atte	empt to solve sor	ne problems of co	omputer science.	
Brief outline of A quantitative c Inequalities invo Data compression	the course: haracteristic of olving mutual in on.	an information. E nformation and en	ntropy of a rand tropy, respective	om variable. Mut ely. Typical seque	ual information. ence, typical set.	
Recommended T. M. Cover, J. J. T. K. Moon, Inf http://digitalcon	Recommended literature: T. M. Cover, J. A. Thomas, Elements of Information Theory, Wiley, 1991 (2nd ed. 2006) T. K. Moon, Information Theory (free online course materials), available at the address http://digitalcommons.usu.edu/ocw_ece/3/					
Course languag Slovak	ge:					
Notes:	Notes:					
Course assessm Total number of	ent f assessed stude	nts: 84				
А	В	C	D	E	FX	
38.1	19.05	19.05	13.1	5.95	4.76	
Provides: prof.	RNDr. Mirko H	orňák, CSc.				
Date of last mo	dification: 03.0	5.2015				
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J. Šafá	rik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚMV/ POI/10	Course name: Insurance					
Course type, scope a Course type: Lectur Recommended cour Per week: 3 Per stu Course method: pre	nd the method: re rse-load (hours): dy period: 42 esent					
Number of credits: 3						
Recommended seme	ster/trimester of the course: 1., 3.					
Course level: II.						
Prerequisities:						
Conditions for cours	e completion:					
Learning outcomes: To provide a groundin knowledge in practic	ng in commercial life, non-life and pension insurance. To apply the theoretical e.					
Brief outline of the c Essential insurance to Bases of life and non- products. Forms and analysis of costs. Sol tariff determinations, the products, sources scheme. Pension insu and sickness insurance	ourse: erms and relations. The organization and structure of commercial insurance. -life commercial insurance. The principles of selling and writting of insurance methods of reinsurance contracts. Economic factors of insurance company, lvency of insurance company and insurance reserve calculation. Methods of forms of bonus and malus systems. Bases of continuous profit testing of a of profit. The bases of pension insurance. Characteristics of basic pension trance in Slovakia, description of particular pillars. Basic principles of health ce in Slovakia.					
 Recommended literature: 1. Chovan, P., Čejková, V.: Malá encyklopédia poistenia a poisťovníctva, Elita Bratislava, 1995 2. Chovan, P.: Základy poisťovníctva, SAP Bratislava, 1994 3. Komorník, J., Futej, D., Nováčková, D., Bahleda, M. : Základy poisťovníctva Európskej únie, Eurounion Bratislava 2001 4. Pidany, J., Kafková, E., Kyseľová, V.: Poisťovníctvo, Royal Unicorn Košice, 1999 5. Cipra T.: Pojistná matematika - teorie a praxe, Ekopress Praha, 1999 6. Cipra T.: Penzijní pojištění a jeho výpočetní aspekty, HZ Praha, 19967. Platná legislatíva pre komerčné a dôchodkové poistenie. 						
Course language: Slovak						
Notes:						
L						

Course assessment Total number of assessed students: 49						
A B C D E FX						
10.2	16.33	28.57	24.49	20.41	0.0	
Provides: RNDr. Pavol Huraj						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J.	Šafárik Univers	sity in Košice					
Faculty: Faculty	Faculty: Faculty of Science						
Course ID: ÚM MTE/10	e ID: ÚMV/ Course name: Mathematical economics						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present							
Number of cred	its: 5						
Recommended s	semester/trime	ster of the cours	e: 2.				
Course level: II.							
Prerequisities:							
Conditions for o Two written exa oral exam.	course complet ms in solving pr	ion: oblems. Final eva	aluation is based	on written exam	s and theoretical		
Learning outco To learn basic no	nes: otions and meth	ods of the moder	n mathematical e	economics.			
Brief outline of The notion of ex exchange econo Production econ Basic knowledg microeconomics	the course: change econom mies. Existence omies. ge of convex is also invited.	y. Edgeworth box of core. Walrasi analysis and top	x. Preferences ar an equilibrium. pology is recor	nd utility function Optimality and o nmended. Basic	ns. Optimality in decentralization.		
 Recommended literature: 1. C.D. Aliprantis, D.J. Brown, O. Burkinshaw: Existence and optimality of competitive equilibria, Springer 1989 2. W. Hildenbrand, A.P. Kirman: Equilibrium analysis, North Holland, 3. A. Takayama: Mathematical economics, Cambridge University Press, 1985 							
Course languag Slovak	e:						
Notes:							
Course assessment Total number of assessed students: 123							
A	B C D E FX						
23.58 22.76 22.76 17.07 9.76 4.07							
Provides: prof. I	Provides: prof. RNDr. Katarína Cechlárová, DrSc.						
Date of last mod	lification: 03.03	5.2015					
Approved: prof.	RNDr. Katarín	a Cechlárová, Dr	Sc.				

University: P. J. Šafá	rik University in Košice							
Faculty: Faculty of S	Faculty: Faculty of Science							
Course ID: ÚMV/ MSE/14	Course name: Mathematical methods in economics, finance and insurance							
Course type, scope a Course type: Recommended cour Per week: Per stud Course method: pre	Course type, scope and the method: Course type: Recommended course-load (hours): Per week: Per study period: Course method: present							
Number of credits: 4								
Recommended seme	ster/trimester of the course:							
Course level: II.								
Prerequisities:								
Conditions for cours Acquiring the require	e completion: ed number of credits in the structure defined by the study plan.							
Learning und required number of creates in the structure defined by the study plan. Learning outcomes: Evaluation of student's competences with respect to the profile of the graduate. Brief outline of the course: The state examination is performed in a form of a debate with the emphasis on one topic of the following courses: ÚMV/NPRa/10 , ÚMV/APS/10, ÚMV/MMF/10 , ÚMV/THR/10, ÚMV/ MTE/10 . 1. Probability distributions of random vectors and their characteristics. 2. Types of convergence of random variables and limit theorems. 3. Markov chains and processes. 4. Modelling queueuing systems. 5. Measuring dependence of random variables and regression models. 6. Analysis of variance and covariance. 7. Time series analysis. 8. Portfolio theory, characteristics of portfolio and modelling financial markets. 9. Exchange economy with infinitely divisible goods, core and equilibrium. 10. Exchange economy with indivisible goods, algorithms. 11. Games of two players. 12. Cooperative games of n players.								
Recommended litera	ture:							
Course language: Slovak								

Notes:

Course assessment Total number of assessed students: 8							
A B C D E FX							
25.0	25.0 25.0 37.5 12.5 0.0 0.0						
Provides:							
Date of last modification: 26.04.2016							
Approved: prof. RNDr. Katarína Cechlárová, DrSc.							

University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	cience				
Course ID: ÚMV/ MMF/10Course name: Mathematical methods in finance					
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: 6					
Recommended semester/trimester of the course: 2.					

Course level: II.

Prerequisities:

Conditions for course completion:

Written tests during the semester. Final evaluation is based on written tests and oral exam.

Learning outcomes:

To provide stochastic methods for investments, financial market analysis and financial forecasting.

Brief outline of the course:

Financial markets, institutions and instruments. Stochastic methods of valuation of financial products. Risk and return, analysis of portfolio of securities. Characteristics of portfolio, mean and variance, measures of dependencies. Admissible, efficient and optimal portfolio. Indiference curves, utility functions. Financial market models. Markowitz's mean-variance model and its modifications, model of capital market line (CML). Sharpe's model and its modifications. Capital assets pricing model (CAPM), security market line model (SML). Decomposition of total risk, market risk and specific risk. Diversification of portfolio. Measurement of performance. Investment and financial decisions. Financial derivatives, their classification and pricing. Financial time series and their decomposition. Analytical and adaptive methods of smoothing. Financial forecasting. Hypothesis of randomness.

Recommended literature:

1. Skřivánková V.-Skřivánek J.: Kvantitatívne metódy finančných operácií, IURA Edition, Bratislava, 2006.

- 2. Elliott R.J.-Kopp P.E.: Mathematics of Financial Markets, Springer, New York, 2005.
- 3. Janssen at al.: Mathematical Finance, ISTE / Wiley, 2009.
- 4. Ross S.M.: Mathematical Finance, Cambridge University Press, 2011.
- 5. Sharpe W.F.- Alexander G.J.: Investments, Prentice-Hall, New Jersey, 1994.
- 6. Shreve S.E.: Stochastic Calculus for Finance, Springer, 2004.

Course language:

Slovak

Notes:

Course assessment Total number of assessed students: 76						
A B C D E FX						
10.53	23.68	18.42	32.89	14.47	0.0	
Provides: doc. RNDr. Valéria Skřivánková, CSc.						
Date of last modification: 22.09.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J. Š	Safárik Univers	ity in Košice					
Faculty: Faculty	of Science						
Course ID: ÚMV TMT/10	Course ID: ÚMV/ Course name: Matroid theory TMT/10						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present							
Number of credit	ts: 5						
Recommended se	emester/trimes	ster of the cours	e: 1., 3.				
Course level: II.							
Prerequisities:							
A student is evalu chosen by him/he group B (35 poin D 60-69 p., E	ated according er at random, c ts at maximum 50-59 p., FX	on: to an oral examir one from the grou). Evaluation sca 0-49 p.	nation during wh up A (65 points ıle: A 90-100	ich he/she answe at maximum) ar p., B 80-89 p	rs two questions nd one from the ., C 70-79 p.,		
Learning outcom A student gets acc in various discipli	es: quainted with t ines of discrete	basic notions of n mathematics.	natroid theory ar	nd possibilities of	f using matroids		
Brief outline of the Independent sets matroids. Hyperp	he course: and bases. Pro lanes.	operties of rank	function. Closu	re operator. Circ	cuits. Duality in		
Recommended lin D. J. A. Welsh: M. J. Oxley, Matroid	terature: Iatroid Theory, Theory, Oxfor	Academic Press d University Pres	, 1976 ss, 2010				
Course language Slovak	:						
Notes:	Notes:						
Course assessment Total number of assessed students: 28							
A	В	С	D	Е	FX		
25.0 17.86 17.86 10.71 21.43 7.14							
Provides: prof. R	Provides: prof. RNDr. Mirko Horňák, CSc.						
Date of last modi	fication: 03.05	5.2015					
Approved: prof. l	RNDr. Katarína	a Cechlárová, Dr	Sc.				

University: P. J.	Šafárik Univers	sity in Košice						
Faculty: Faculty	of Science							
Course ID: ÚBI MOB2/10	Se ID: ÚBEV/ Course name: Molecular Biology 2/10							
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present								
Number of cred	its: 3							
Recommended	semester/trime	ster of the course	e: 2.					
Course level: I.,	II.							
Prerequisities:								
Conditions for a	course complet	ion:						
Learning outcom Familiarize stud and their work, f gene expression	mes: lents with the st focusing primari and cell cycle.	ructure, propertie ly on the molecul	es and function ar mechanisms	s of information 1 of regulation of D	macromolecules DNA replication,			
Structure and primitotic and mei extrachromoson The human geno and editing. Tra protein interaction the cell cycle.	Brief outline of the course: Structure and properties of information macromolecules. Molecular structure of chromatin and mitotic and meiotic chromosomes. Dynamics of chromosomes. Replication of chromosomal and extrachromosomal DNA. Repair of DNA damage. Genome of prokaryotic and eukaryotic cells. The human genome. Mobile genetic elements. Transcription and posttranscriptional modifications and editing. Translation and posttranslational modifications. Specific protein degradation. DNA-protein interactions. Regulation of the expression of prokaryotic and eukaryotic genes. Control of the cell cycle							
Recommended literature: E. Mišúrová:Molekulárna biológia. Učebné texty, PF UPJŠ Košice, 1999 E. Mišúrová, P. Solár: Molekulová biológia. Učebné texty, PF UPJŠ, 2007 S.Rosypal:Úvod do molekulární biologie. Grafex Blansko, Brno,1999 Alberts, D.Bray, J. Lewis a kol.: Molecular Biology of the Cell, Academic Press, London, 1994 D.P. Clark: Molecular Biology, Elsevier Academic Press, London, 2005								
Course language:								
Notes:								
Course assessment Total number of assessed students: 0								
А	В	С	D	E	FX			
0.0	0.0	0.0	0.0	0.0	0.0			
Provides: doc. R	NDr. Peter Sola	ir, PhD.			·			
Date of last mod	lification: 03.0	5.2015		-				

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ NJ//13	Course name: Naval Yach	ting				
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:						
Notes:						
Course assessment Total number of assessed students: 2						
abs n						
100.0 0.0						
Provides: doc. Mgr. Rastislav Feč, PhD.						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J.	. Šafárik Univers	sity in Košice			
Faculty: Faculty	y of Science				
Course ID: Dek UPJŠ/PPZ/13	Course ID: Dek. PFCourse name: Personality Development and Key Competences for Success on a Labour Market				
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: Per study period: 14s Course method: present					
Number of crea	lits: 2				
Recommended	semester/trime	ster of the cours	e: 1., 3.		
Course level: II	•				
Prerequisities:					
Conditions for	course completi	ion:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessment Total number of assessed students: 39					
А	В	С	D	Е	FX
100.0 0.0 0.0 0.0 0.0					
Provides: RNDr. Peter Stefányi, PhD.					
Date of last mo	Date of last modification: 03.05.2015				
Approved: prof. RNDr. Katarína Cechlárová, DrSc.					

University • P I	Šafárik Univers	ity in Košice			
	University: 1. J. Salarik University in Rosiec				
Faculty: Facult	y of Science				
Course ID: KPPaPZ/PPZM	g/12 Course na	Course name: Psychology and Health Psychology (Master's Study)			
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 credits: 4 Recommended semester/trimester of the course: Course level: II					
Prerequisities:	··				
Conditions for	course completi	on:			
Learning outco	omes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessment Total number of assessed students: 223					
А	В	С	D	Е	FX
19.73	19.73 25.56 25.56 12.56 16.14 0.45				
Provides: PhDr. Anna Janovská, PhD., PhDr. Karolína Barinková, PhD., Mgr. Lucia Hricová, PhD.					
Date of last mo	Date of last modification: 03.05.2015				
Approved: prof	. RNDr. Katarína	a Cechlárová, Dr	Sc.		

Faculty: Faculty of Science Course ID: ÚMV/ THO/10 Course name: Queueing theory THO/10 Course type, scope and the method: Course type, scope and the method: Course type Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 1., 3. Course level: II. Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Qucuing systems. Stationary, ordinary and Markov (memoryles) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Course language: Slovak Nore damagage: Slovak Nore: anaguage: Slovak A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24	University: P. J.	University: P. J. Šafárik University in Košice						
Course ID: ÚMV/ THO/10 Course type, scope and the method: Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 1., 3. Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p. E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing systems. Brief outline of the course: Queuing systems. The course: Queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Course language: Slovak Notes: Course language: Slovak Notes: Course sassesment Total number of assessed students: 49 A B Course language: Slovak	Faculty: Faculty	of Science						
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 1., 3. Course level: II. Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Course assessment Total number of assessed students: 49 E A B C D E FX Qu41 22.45 8.16 <td>Course ID: ÚM THO/10</td> <td>V/ Course na</td> <td>me: Queueing th</td> <td>leory</td> <td></td> <td></td>	Course ID: ÚM THO/10	V/ Course na	me: Queueing th	leory				
Number of credits: 6 Recommended semester/trimester of the course: 1., 3. Course level: II. Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: A B C D E FX Q.4 B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. D	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 4 Per study period: 56 Course method: present							
Recommended semester/trimester of the course: 1., 3. Course level: II. Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Course language: Slovak Notes: Course language: Slovak Note, E A	Number of credi	its: 6						
Course level: II. Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Q D A B C D A B C D E Slovak Notes: Course language: Slovak	Recommended s	emester/trimes	ster of the course	e: 1., 3.				
Prerequisities: Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Q A B C D A B Q A B Course language: Slovak Notes: Course assessment Total number of	Course level: II.							
Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p., E 50-59 p., FX 0-49 p. Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Studenty and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Queuing system students: 49 A B C D E FX A B C D E FX Queuing assessed students: 49 A B C D E FX Queuing system Subject to the system of the course: Slovak Notes: Queuing system. Subject to the course:	Prerequisities:							
Learning outcomes: A student gets acquainted with analysis of input requests streams and with functioning of simple queuing systems. Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Course assessment Total number of assessed students: 49 A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015 Anarased, prof. RNDr. Kataging Carebársaná Datás	Conditions for c A student is evalu- chosen by him/h group B (40 poin D 60-69 p., E	Conditions for course completion: A student is evaluated according to an oral examination during which he/she answers two questions chosen by him/her at random, one from the group A (60 points at maximum) and one from the group B (40 points at maximum). Evaluation scale: A 90-100 p., B 80-89 p., C 70-79 p., D 60-69 p. F. 50-59 p. FX 0-49 p.						
Brief outline of the course: Queuing system. Stationary, ordinary and Markov (memoryless) input requests stream. Basic types of input requests streams. Auxiliary lemmas. Properties of a memoryless input requests stream. Service analysis in a simple queuing system. Markov's theorem. Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Course assessment Total number of assessed students: 49 A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015	Learning outcom A student gets ad queuing systems	nes: cquainted with a	analysis of input	requests stream	s and with funct	ioning of simple		
Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989 Course language: Slovak Notes: Course assessment Total number of assessed students: 49 A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015	Brief outline of t Queuing system. of input requests Service analysis	the course: Stationary, ordi s streams. Auxi in a simple que	nary and Markov liary lemmas. Pro uing system. Mar	(memoryless) i operties of a me kov's theorem.	nput requests struemoryless input	eam. Basic types requests stream.		
Course language: Slovak Notes: Course assessment Total number of assessed students: 49 E A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015 Date of last modification: 03.05.2015	Recommended I B.V. Gnedenko a Birkhauser Bosto	Recommended literature: B.V. Gnedenko and I.N. Kovalenko, Introduction to Queueing Theory, Second Edition, Birkhauser Boston, Cambridge MA, 1989						
Notes: Course assessment Total number of assessed students: 49 A A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015	Course language: Slovak							
Course assessment Total number of assessed students: 49 A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. D E FX Date of last modification: 03.05.2015 DrSc.	Notes:							
A B C D E FX 20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015 E E	Course assessment Total number of assessed students: 49							
20.41 22.45 8.16 16.33 20.41 12.24 Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015 20.41 12.24	A	В	С	D	E	FX		
Provides: prof. RNDr. Mirko Horňák, CSc. Date of last modification: 03.05.2015	20.41	20.41 22.45 8.16 16.33 20.41 12.24						
Date of last modification: 03.05.2015	Provides: prof. R	Provides: prof. RNDr. Mirko Horňák, CSc.						
Annuavade prof DNDr Vatarina Cashlárová DrCa	Date of last mod	Date of last modification: 03.05.2015						
Approveu: prot. KINDI. Katafina Cecniarova, DISC.	Approved: prof.	RNDr. Katarína	Cechlárová, Dr	Sc.				

University: P. J. Šafárik University in Košice								
Faculty: Faculty of	of Science							
Course ID: ÚGE/ EUG1/10	Course na	Course name: Regional geography of Europe						
Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 3 Per study period: 42 Course method: present								
Number of credit	s: 3							
Recommended se	mester/trimes	ter of the cours	e: 2.					
Course level: I., I	[
Prerequisities:								
Conditions for co test plus oral exam	urse completi nination	on:						
Learning outcom	es:							
Brief outline of the course: Pre-history of Europe, development of population, creation of the first state organisations. Development of political map of Europe from the Middle Ages and to present. National, linguistic and religious development of European population and its present distribution. Economy of different regions of Europe – Northern Europe, Southern Europe, Western Europe, postcommunist countries of Central Europe, and Russia.								
 BLOUET, B. W. 2008: The EU & Neighbours. A Geography of Europe in the Modern World. Wiley & Sons. De BLIJ, H.J., MULLER, P. O. 2008: The World Today. Concepts and Regions in Geography. 3rd edition. Wiley. ISBN 0-470-04681-3 GAJDOŠ, A., MAZÚREK, J. 2004: Geografia štátov Európskej únie. 1. časť, Banská Bystrica: Fakulta prírodných vied, 186 s. ISBN 80-8055-997-X GAJDOŠ, A., MAZÚREK, J. 2006: Geografia štátov Európskej únie a ostatných štátov Európy. 2. časť, Banská Bystrica: Fakulta prírodných vied, 159 s. ISBN 80-8083-284-6 SKOKAN, L. 2005: Rusko. Geografický přehled. Ústí nad Labem, 215 s ISBN 80-7044-647-1 VITURKA, M., ŘEHÁK, S., VANČURA, M. 2004: Regionální geografie Evropy a ČR, Brno: Masarykova univerzita v Brne. 126 s., ISBN 80-210-3504-8 								
Course language:								
Notes:								
Course assessmer Total number of a	nt ssessed studen	ts: 153						
Α	В	С	D	E	FX			
21.57	18.3	22.88	16.99	19.61	0.65			

Provides: RNDr. Stela Csachová, PhD.

Date of last modification: 03.05.2015

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

Faculty of Science Course ID: ÚMV/ TRZ/15 Course name: Risk theory TRZ/15 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: 3 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at L: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacaková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course assessment Total number of assessed students: 6 Course assessent students: 6 A <th co<="" th=""><th colspan="6">University: P. J. Šafárik University in Košice</th></th>	<th colspan="6">University: P. J. Šafárik University in Košice</th>	University: P. J. Šafárik University in Košice							
Course ID: ÚMV/ TRZ/15 Course type, scope and the method: Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: prosent Number of credits: 3 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance Classification of risks. Individual and collective risk models. Probability distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Non-Life Insurance Mathematics, MFF UK, Praha, 1991 Sudswa W: Course language: Slovak Notes: Course language: Slovak Net also a bioistibution of assessed students: 6 A A B Course language: Slovak	Faculty: Faculty of Science								
Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per weck: 2 Per study period: 28 Course method: present Number of credits: 3 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlman H: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T:. Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: <td< td=""><td>Course ID: ÚMV/ TRZ/15</td><td colspan="5">Course name: Risk theory</td></td<>	Course ID: ÚMV/ TRZ/15	Course name: Risk theory							
Number of credits: 3 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance.Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: Course assessment Total number of assessed students: 6 <td>Course type, scope a Course type: Lectu Recommended cou Per week: 2 Per stu Course method: pro</td> <td colspan="8">Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present</td>	Course type, scope a Course type: Lectu Recommended cou Per week: 2 Per stu Course method: pro	Course type, scope and the method: Course type: Lecture Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present							
Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizka v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: <td c<="" td=""><td>Number of credits: 1</td><td>3</td><td></td><td></td><td></td><td></td></td>	<td>Number of credits: 1</td> <td>3</td> <td></td> <td></td> <td></td> <td></td>	Number of credits: 1	3						
Course level: II. Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Slovak Notes:	Recommended seme	ester/trimes	ster of the cours	e: 2.					
Prerequisities: Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: Total number of assessed students: 6 M A B C D E FX 16.67 33.33 16.67 16.67 0.0 16.67	Course level: II.								
Conditions for course completion: Based on written tests and oral exam. Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: Course assessment Total number of assessed students: 6 A B C D E FX A B C D E FX A B C D E FX A <	Prerequisities:								
Learning outcomes: To give theoretical knowledge in stochastic modelling of insurance risk process and the elements of ruin theory. Brief outline of the course: The conception of risk in insurance.Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: Course assessment Total number of assessed students: 6 A B C D E FX Total number of assessed students: 6	Conditions for cours Based on written test	se completi ts and oral e	on: exam.						
Brief outline of the course: The conception of risk in insurance. Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations. Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: C D E FX A B C D E Course information of the total number of assessed students: 6 A B C	Learning outcomes: To give theoretical k of ruin theory.	nowledge in	n stochastic mode	elling of insuran	ace risk process a	nd the elements			
Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. Course language: Slovak Notes: Course assessment Total number of assessed students: 6 A B C D E FX 16.67 33.33 16.67 16.67 0.0 16.67	Brief outline of the course: The conception of risk in insurance.Classification of risks. Individual and collective risk models. Probability distributions of individual claims. Distribution of the total number and of the hight of aggregated claims. Compound distributions, their characteristics and moment generating functions. The risk process as special random process. Cramér- Lundberg model and its modification. Risk reserves and ruin probability approximations.								
Course language: SlovakNotes:Course assessment Total number of assessed students: 6ABCDEFX16.6733.3316.6716.670.016.67	 Recommended literature: 1. Buhlmann H.: Mathematical Methods in Risk Theory, Springer, Berlin, 1996. 2. Cipra T.: Teorie rizika v pojistné matematice. MFF UK, Praha, 1991 3. Daykin at al.: Practical risk theory for actuarial. Chapman and Hall, 1994 4. Mikosch T.: Non-Life Insurance Mathematics, Springer, Berlin, 2009. 5. Pacáková V.: Aplikovaná poistná štatistika, Ekonóm, Bratislava 1996. 								
Notes:Course assessmentTotal number of assessed students: 6ABCDEFX16.6733.3316.6716.670.016.67	Course language: Slovak								
Course assessment Total number of assessed students: 6ABCDEFX16.6733.3316.6716.670.016.67	Notes:								
A B C D E FX 16.67 33.33 16.67 16.67 0.0 16.67	Course assessment Total number of assessed students: 6								
16.67 33.33 16.67 16.67 0.0 16.67	A	В	С	D	E	FX			
	16.67	16.67 33.33 16.67 16.67 0.0 16.67							
Provides: doc. RNDr. Valéria Skřivánková, CSc.	Provides: doc. RND	. Valéria Sk	řivánková, CSc.		•	*			
Date of last modification: 03.05.2015	Date of last modifica	ation: 03.05	5.2015						

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

University: P. J. Šafá	rik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚTVŠ/ ÚTVŠ/CM/13	Course name: Seaside Ae	obic Exercise					
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	ture:						
Course language:							
Notes:							
Course assessment Total number of assessed students: 7							
abs n							
57.14 42.86							
Provides: Mgr. Alena Buková, PhD., Mgr. Agata Horbacz, PhD.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Katarína Cechlárová, DrSc.							

University: P. J.	. Šafárik Univers	ity in Košice				
Faculty: Faculty	y of Science					
Course ID: ÚIN OPS1/15	JF/ Course na	Course name: Security of computer networks				
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 2 / 2 Per study period: 28 / 28 Course method: present						
Number of crea	lits: 5					
Recommended	semester/trimes	ster of the cours	e: 4.			
Course level: II	•					
Prerequisities:						
Conditions for	course completi	on:				
Learning outco	mes:					
Brief outline of	the course:					
Recommended	literature:					
Course languag	ge:					
Notes:						
Course assessm Total number of	ent f assessed studen	.ts: 5				
А	В	С	D	Е	FX	
60.0	0.0	0.0	40.0	0.0	0.0	
Provides: doc. Ing. Štefánia Gallová, CSc., RNDr. Rastislav Krivoš-Belluš, PhD., doc. RNDr. Jozef Jirásek, PhD.						
Date of last modification: 03.05.2015						
Approved: prof	RNDr. Katarína	a Cechlárová, Dr	Sc.			

University: P. J. Šafá	rik University in Košice						
Faculty: Faculty of S	cience						
Course ID: ÚMV/ VKP/10	ourse ID: ÚMV/ KP/10Course name: Selected topics in probability						
Course type, scope a Course type: Lectur Recommended cour Per week: 3 Per stu Course method: pre	nd the method: e cse-load (hours): dy period: 42 esent						
Number of credits: 5							
Recommended seme	ster/trimester of the course: 1.						
Course level: II.							
Prerequisities:							
Conditions for cours Written tests during t	e completion: he semester. Final evaluation isb ased on written tests and oral exam.						
Learning outcomes: Perspective of probab results of probability	wility from the standpoint of measure theory. Understanding of most important theory.						
Brief outline of the c • Probability and mea o Set systems, randon o Distribution function o Independence o Radon-Nikodym de • Characteristics of ra o Moment characteristic o Characteristic and g o Quantile characteristic o Conditional densition o Transformations of • Important probabiliti o Discrete distribution o Absolute continuou • Convergence of sequent o Laws of large number o Central limit theore	ourse: sure n variables and measure ons and their properties privative of measure andom variables stics genarating functions stics es and conditional mean values random variables, convolutions ty distributions us distributions uences of random variables ice (a.s., Lp, P, D) pers ms						
 Loeve: Probability Rényi: Foundations Athreya, Lahiri: Me 	heory, Van Nostrand, 1960 of Probability, Holden-Day, 1970 easure Theory and Probability Theory, Springer, 2006						
Course language:							

Slovak							
Notes:							
Course assessment Total number of assessed students: 81							
А	В	С	D	E	FX		
14.81	13.58	14.81	14.81	30.86	11.11		
Provides: doc. RNDr. Ivan Žežula, CSc.							
Date of last modification: 03.05.2015							
Approved: prof. RNDr. Katarína Cechlárová, DrSc.							

University: P. J. Šafá	rik Universi	ty in Košice			
Faculty: Faculty of S	cience				
Course ID: KPPaPZ/SPVKE/07	Course nations	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 meth ce rse-load (ho dy period: csent	hod: ours): 28			
Number of credits: 2					
Recommended seme	ster/trimest	ter of the course: 2.			
Course level: II.					
Prerequisities:					
Conditions for cours	e completio	on:			
Learning outcomes:					
Brief outline of the c	ourse:				
Recommended litera	iture:				
Course language:					
Notes:					
Course assessment Total number of asses	ssed student	s: 111			
abs		n	Z		
97.3 2.7 0.0					
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last modifica	tion: 03.05.	.2015			
Approved: prof. RNI	Dr. Katarína	Cechlárová, DrSc.			

University: P. J. Šafá	rik Univers	ity in Košice			
Faculty: Faculty of S	cience	-			
Course ID: ÚTVŠ/ TVa/11	urse ID: ÚTVŠ/ Course name: Sports Activities I. //11				
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the met ce rse-load (h dy period: esent	thod: ours): 28			
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	iture:				
Course language:					
Notes:					
Course assessment Total number of asse	ssed studen	ts: 7947			
abs		n	neabs		
87.96 8.12 3.93					
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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško					
Date of last modification: 03.05.2015					
Approved: prof. RNDr. Katarína Cechlárová, DrSc.					

University: P. J. Šafá	rik Univers	ity in Košice				
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ TVb/11	Course na	me: Sports Activities II.				
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	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 asses	ssed studen	ts: 7437				
abs		n	neabs			
85.03	85.03 10.93 4.03					
 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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD. Date of last modification: 03.05.2015 						

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

University: P. J. Šafá	University: P. J. Šafárik University in Košice					
Faculty: Faculty of S	cience					
Course ID: ÚTVŠ/ TVc/11	Course na	me: Sports Activities III.				
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	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	iture:					
Course language:						
Notes:						
Course assessment Total number of asses	ssed studen	ts: 4650				
abs		n	neabs			
89.63 4.71 5.66						
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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško						
Date of last modification: 03.05.2015						
Approved: prof. RNDr. Katarína Cechlárová, DrSc.						

University: P. J. Šafá	rik Univers	ity in Košice		
Faculty: Faculty of S	cience			
Course ID: ÚTVŠ/ TVd/11	Course na	me: Sports Activities IV.		
Course type, scope a Course type: Practic Recommended cour Per week: 2 Per stu Course method: pre	nd the met ce rse-load (h dy period: esent	thod: ours): 28		
Number of credits: 2	2			
Recommended seme	ster/trimes	ster of the course: 4.		
Course level: I., I.II.,	II.			
Prerequisities:				
Conditions for cours	se completi	on:		
Learning outcomes:				
Brief outline of the c	ourse:			
Recommended litera	ture:			
Course language:				
Notes:				
Course assessment Total number of asses	ssed studen	ts: 3884		
abs		n	neabs	
85.79 6.77 7.44				
 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, prof. RNDr. Stanislav Vokál, DrSc., Mgr. Lucia Kršňáková, PhD., Mgr. Dávid Kaško, Mgr. Aurel Zelko, PhD., Mgr. Dana Dračková, PhD. Date of last modification: 03.05.2015 				

Approved: prof. RNDr. Katarína Cechlárová, DrSc.

Faculty: Faculty of Science

Course ID: ÚMV/	Course name: Stochastic processes I
NPRa/10	

Course type, scope and the method:

Course type: Lecture / Practice

Recommended course-load (hours): Per week: 3 / 2 **Per study period:** 42 / 28

Course method: present

Number of credits: 6

Recommended semester/trimester of the course: 1.

Course level: II.

Prerequisities: ÚMV/VKP/10

Conditions for course completion:

To obtain in written tests during the semester at least 50%. Total evaluation based on written tests and oral exam.

Learning outcomes:

To provide a grounding in modelling of stochastic processes and their applications to real life problems.

Brief outline of the course:

Stochastic (random) processes, their distributions and characteristics. Trajectory of the process. Classification of processes -homogenous,ergodic and stacionary process. Markov chains with discrete time, classification of states of the process. Evaluation of transitions, optimal strategies, Howard's algorithm. Markov chains with continuous time, intensity of transition. Kolmogorov's differential equations, methods of solutions. Poisson process. Birth-and-death processes. General linear process. Applications to queuing theory. Kendall's classification of queuing systems, opened and closed systems, systems with waiting. Applications to renewal theory and reliability. Markov chains in discrete renewal models. Renewal process with continuous time. Limit theorems of renewal theory.

Recommended literature:

1. Skřivánková V.: Náhodné procesy a ich aplikácie, UPJŠ, Košice, 2004.

2. Pfeiffer P.E.: Probability for Applications, Springer, New York, 1990.

3. Prášková Z., Lachout P.: Základy náhodných procesu, MFF UK, Praha, 1998.

4. Ross S.M.: Introduction to probability models, Elsevier, London, 2007.

5. Stewart W.J.: Probability, Markov Chains, Queues, and Simulations, Princeton University Press, 2009.

Course language:

Slovak

Notes:

Course assessment Total number of assessed students: 71							
А	A B C D E FX						
7.04	16.9	22.54	30.99	19.72	2.82		
Provides: doc.]	RNDr. Valéria Sk	řivánková, CSc.					
Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Katarína	a Cechlárová, Dr	Sc.				

Faculty: Faculty of Science Course ID: ÚMV/ NPRb/10 Course name: Stochastic processes II Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (suetral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series Analysis and Its Applications with R Examples, Springer, New York, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradniček V.: Kapitoly z finančenj matematiky, Epos, Bra	University: P. J. Šafá	rik University in Košice
Course ID: ÚMV// NPRb/10 Course name: Stochastic processes II Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olsarová	Faculty: Faculty of S	cience
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present Number of credits: 6 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002	Course ID: ÚMV/ NPRb/10	Course name: Stochastic processes II
Number of credits: 6 Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Präkková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradniček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak) 6. Oksendal B.K.: Stochastic Differential Equations, Springer, 2002 Course language: Slovak	Course type, scope a Course type: Lectur Recommended cour Per week: 3 / 2 Per Course method: pre	nd the method: re / Practice rse-load (hours): study period: 42 / 28 esent
Recommended semester/trimester of the course: 2. Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradniček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak)	Number of credits: 6	
Course level: II. Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradniček V.: Kapitoly z finančnej matematiky, Epos,	Recommended seme	ster/trimester of the course: 2.
Prerequisities: ÚMV/NPRa/10 Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Niley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak)	Course level: II.	
Conditions for course completion: Test and individual project work Exam Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Miley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak) 6. Oksendal B.K.: Stochastic Differential Equations	Prerequisities: ÚMV	/NPRa/10
Learning outcomes: To obtain knowledge of the stationary stochastic processes analysis in time domain and spectral domain. To study properties of random processes with discrete time (time series) and continuous time and their application in finance. Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 4. Shuinway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak) 6. Oksendal B.K.: Stochastic Differential Equations, Springer, 2002 Course language: Slovak	Conditions for cours Test and individual p Exam	e completion: roject work
Brief outline of the course: 1. Stationary precess, linear process, causal and invertible process. 2. Time domain analysis (autocovariance and partial autocovariance function) 3. Frequency domain analysis (spectral density and distribution function, periodogram) 4. Prediction of time series 5. Random processes with continuous time (fundamental concepts) 6. Brownian motion, Ito's process, Ito's lemma and its application 7. The Black-Scholes formula Recommended literature: 1. Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 2. Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) 3. Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 4. Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 5. Melicherčík I., Olšarová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak) 6. Oksendal B.K.: Stochastic Differential Equations, Springer, 2002 Course language: Slovak	Learning outcomes: To obtain knowledge domain. To study properties o their application in fi	of the stationary stochastic processes analysis in time domain and spectral f random processes with discrete time (time series) and continuous time and nance.
 Recommended literature: Brockwell P., Davis R.: Introduction to Time Series and Forecasting, Springer, New York, 2002 Prášková Z.: Základy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) Tsay R.: Analysis of Financial Time Series, Wiley Interscience, New Jersey, 2005 Shumway R., Stoffer D.: Time Series Analysis and Its Applications with R Examples, Springer, New York, 2006 Melicherčík I., Olšarová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, 2005 (in Slovak) Oksendal B.K.: Stochastic Differential Equations, Springer, 2002 Course language: Slovak 	 Brief outline of the c Stationary precess, Time domain analy Frequency domain Prediction of time Random processes Brownian motion, The Black-Scholes 	ourse: linear process, causal and invertible process. vsis (autocovariance and partial autocovariance function) analysis (spectral density and distribution function, periodogram) series with continuous time (fundamental concepts) Ito's process, Ito's lemma and its application formula
Course language: Slovak	Recommended litera 1. Brockwell P., Davi 2002 2. Prášková Z.: Zákla 3. Tsay R.: Analysis o 4. Shumway R., Stoff Springer, New York, 5. Melicherčík I., Olš 2005 (in Slovak) 6. Oksendal B.K.: Sto	s R.: Introduction to Time Series and Forecasting, Springer, New York, dy náhodných procesů II, Karolinum, Praha, 2004 (in Czech) of Financial Time Series, Wiley Interscience, New Jersey, 2005 fer D.: Time Series Analysis and Its Applications with R Examples, 2006 arová L., Úradníček V.: Kapitoly z finančnej matematiky, Epos, Bratislava, ochastic Differential Equations, Springer, 2002
	Course language: Slovak	

Course assessment Total number of assessed students: 50							
А	A B C D E FX						
26.0	30.0	14.0	12.0	16.0	2.0		
Provides: RND	r. Martina Hančo	vá, PhD.					
Date of last modification: 03.05.2015							
Approved: prof	f. RNDr. Katarína	a Cechlárová, Dr	Sc.				

University: P. J.	Šafárik Univers	sity in Košice			
Faculty: Faculty	of Science				
Course ID: ÚF SEV/10	V/ Course na	ame: Structure an	d Evolution of t	he Universe	
Course type, sc Course type: L Recommended Per week: 2 Pe Course method	ope and the me Lecture I course-load (h er study period d: present	thod: ours): 28			
Number of cred	lits: 3				
Recommended	semester/trime	ster of the course	e: 2.		
Course level: I.,	II.				
Prerequisities:					
Conditions for Test; seminar pa Oral exam with	course complet aper. preparation; 3 q	ion: uestions within th	ne curriculum pro	esented during th	e course.
Learning outco Become acquair	mes: nted with basic k	nowledge about t	he structure and	evolution of the	universe.
Brief outline of The stars, their l universe. Cosmo	the course: basic properties, blogical theories	structure and evo , formation, evolu	lution. Structure	e and distribution of the universe.	of matter in the
Recommended 1. Carroll, B. W Publishing Com 2. Contopoulos, 1984 3. Narlikar, J.V.	literature: ., Ostlie, D. A., pany, Reading, D. Kotsakis, Co , An Introductio	An Introduction to Massachusetts, 19 osmology, the stru n to Cosmology, 0	o Modern Astroj 996. Icture and evolut Cambridge Univ	physics, Addison- tion of the Univer ersity Press, Cam	-Wesley rse, Springer, ıbridge, 2002
Course languag Slovak, English	je:				
Notes:	Notes:				
Course assessment Total number of assessed students: 104					
А	В	C	D	Е	FX
24.04	33.65	15.38	15.38	11.54	0.0
Provides: doc. F	RNDr. Rudolf G	ális, PhD.		·	
Date of last mo	dification: 03.03	5.2015			
Approved: prof. RNDr. Katarína Cechlárová, DrSc.					

University: P. J	. Šafárik Univ	ersity in Košice			
Faculty: Facult	y of Science				
Course ID: ÚN SVK/10	AV/ Course	name: Students sc	ientific conferen	ce	
Course type, so Course type: Recommende Per week: Pe Course metho	cope and the d course-load or study period od: present	nethod: (hours): 1:			
Number of cre	dits: 4				
Recommended	semester/tri	nester of the cours	e:		
Course level: I	., II.				
Prerequisities:					
Conditions for	course comp	letion:			
Learning outco Individual scie public presenta	omes: ntific work of tion.	students. Publishing	g of obtained res	ults in a written t	form and as a
Brief outline of	f the course:				
Recommended With respect to	l literature: the research p	problematics (article	in journals, boo	ks).	
Course langua Slovak or Engl	ge: ish				
Notes:					
Course assessm Total number of	nent of assessed stud	lents: 57			
А	В	С	D	E	FX
98.25	1.75	0.0	0.0	0.0	0.0
Provides:				•	
Date of last mo	odification: 03	.05.2015			
Approved: pro	f. RNDr. Kata	rína Cechlárová, Dr	Sc.		

University: P. J. Šafá	rik University in Košice				
Faculty: Faculty of S	cience				
Course ID: ÚTVŠ/ LKSp//13	Course name: Summer Co	ourse-Rafting of TISA River			
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 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	ssed students: 92				
	abs	n			
	35.87	64.13			
Provides: Mgr. Peter Bakalár, PhD.					
Date of last modifica	Date of last modification: 03.05.2015				
Approved: prof. RNI	Dr. Katarína Cechlárová, Dr	Sc.			

University: P. J. Šafá	rik University in Košice			
Faculty: Faculty of S	cience			
Course ID: ÚTVŠ/ KP/12	Course name: Survival Co	urse		
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 cours			
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	ssed students: 251			
	abs	n		
	43.82	56.18		
Provides: Mgr. Marek Valanský, MUDr. Peter Dombrovský				
Date of last modifica	tion: 03.05.2015			
Approved: prof. RNI	Dr. Katarína Cechlárová, Dr.	bc.		

University: P. J. Ša	afárik Univers	ity in Košice				
Faculty: Faculty o	f Science					
Course ID: ÚMV/ DIS/10	Course na	me: Taxes and in	nformation syste	ms		
Course type, scop Course type: Lec Recommended c Per week: 3 / 2 P Course method:	Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 3 / 2 Per study period: 42 / 28 Course method: present					
Number of credits	s: 5					
Recommended set	mester/trimes	ster of the course	e: 4.			
Course level: II.						
Prerequisities:						
Conditions for con Projects	urse completi	on:				
Learning outcome To obtain basic in Republic.	es: formations on	Information syst	tem developmen	t. To learn tax sy	vstem in Slovak	
Brief outline of the Information system overview of mode The system of tax Information technology	e course: m, subsystem ling technique c laws. Electro plogy in tax ac	, information systems. Structured met onic Signature - Iministration and	stem developme hodologies. Algo mathematical fo banking.	ent life cycle. Vi orithms in taxes. oundations. Elect	isual modeling, ronic Banking.	
Recommended lite Booch G., Jacobso Wesley Pub. Co. 1	e rature: on I., Rumbaug 998, ISBN 0-2	gh J.: The Unified 20157168-4	d Modeling Lang	guage user Guide	, Addison-	
Course language: Slovak						
Notes:						
Course assessment Total number of assessed students: 143						
А	В	С	D	Е	FX	
53.15	17.48	15.38	8.39	5.59	0.0	
Provides: doc. RNDr. Roman Soták, PhD.						
Date of last modif	ication: 03.05	5.2015				
Approved: prof. R	NDr. Katarína	Cechlárová, Dr	Sc.			
				1		

University: P. J.	. Šafárik Univers	ity in Košice			
Faculty: Faculty	y of Science				
Course ID: KPPaPZ/UPR/0	Course na	ame: The Art of	Aiding by Verbal	Exchange	
Course type, sc Course type: F Recommended Per week: 2 Pe Course metho	Course type, scope and the method: Course type: Practice Recommended course-load (hours): Per week: 2 Per study period: 28 Course method: present				
Number of crea	lits: 2				
Recommended	semester/trimes	ster of the cours	e: 4.		
Course level: II	-				
Prerequisities:					
Conditions for	course completi	on:			
Learning outco	mes:				
Brief outline of	the course:				
Recommended	literature:				
Course languag	ge:				
Notes:					
Course assessm Total number of	ent f assessed studen	ts: 49			
A B C D E FX					
85.71 4.08 2.04 2.04 2.04 4.08					
Provides: Mgr. Ondrej Kalina, PhD.					
Date of last mo	dification: 03.05	5.2015			
Approved: prof	. RNDr. Katarína	a Cechlárová, Dr	Sc.		

University: D I	Šofárik Univer	vity in Kočico				
Ecoulty: Ecoult						
Faculty: Faculty						
Course ID: UM TKO/10	V/ Course na	ame: Theory of c	codes			
Course type, sc Course type: I Recommended Per week: 4 Pe Course metho	ope and the me Lecture I course-load (h er study period d: present	thod: nours): : 56				
Number of cred	lits: 6					
Recommended	semester/trime	ster of the cours	e: 1., 3.			
Course level: II						
Prerequisities:						
Conditions for a A student is eva chosen by him/l at maximum). H 50-59 p., FX	course complet luated according her at random, o Evaluation scale: 0-49 p.	ion: to an oral examine from the grou A 90-100 p.,	nation during wh p A and one fror B 80-89 p., C	tich he/she answe n the group B (bo C 70-79 p., D .	ors two questions oth for 50 points 60-69 p., E	
Learning outco A student gets a of their applicat	mes: cquainted with b ion.	asic principles ar	d theoretical bas	es of text coding	and possibilities	
Brief outline of Monoids. Basic codes. Submon words. Test for sets in monoids.	the course: notions of theory oids generated b recognising code . Thin codes. Co	y of codes. Examp by codes. Stable es. Measure of a c mposition of cod	oles of codes. Im submonoids. Gr ode. Bernoulli d es. Indecomposa	portant classes of oup codes. Free istribution. Dyck able codes.	codes. Maximal hull of a set of code. Complete	
Recommended J. Berstel and D	literature: . Perrin, Theory	of Codes, Acade	mic Press, 1985			
Course languag Slovak	ge:					
Notes:						
Course assessment Total number of assessed students: 42						
А	A B C D E FX					
23.81	11.9	11.9	19.05	21.43	11.9	
Provides: prof.	RNDr. Mirko Ho	orňák, CSc.	1			
Date of last mo	dification: 03.03	5.2015				
Approved: prof	. RNDr. Katarín	a Cechlárová, Dr	Sc.			

University: P. J. Šafá	rik University in Košice				
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 seme	ster/trimester of the co	urse:			
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: 81				
	abs	n			
	32.1	67.9			
Provides: PaedDr. Im	rich Staško, doc. PhDr.	Ivan Šulc, CSc.			
Date of last modifica	Date of last modification: 03.05.2015				
Approved: prof. RNI	Dr. Katarína Cechlárová	DrSc.			

University: P. J. Šafárik University in Košice			
Faculty: Faculty of Science			
Course ID: D PrávF/ZP2/11	Course name: Základy práva pre prirodovedcov II		
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:			
Course level: II.			
Prerequisities:			
Conditions for course completion:			
Learning outcomes:			
Brief outline of the course:			
Recommended literature:			
Course language:			
Notes:			
Course assessment Total number of assessed students: 95			
	abs	n	
	97.89	2.11	
Provides:			
Date of last modification: 03.05.2015			
Approved: prof. RNDr. Katarína Cechlárová, DrSc.			