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COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KI/1-INF-220/00		Course title: Algorithms and Data Structures			
Educational activities: Type of activities: lecture Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Recommended prerequisites: 1-INF-166 Programming (2) in Java or 1-AIN-170 Programming (2)					
Course requirements: Homeworks, exam Scale of assessment (preliminary/final): 0/100					
Learning outcomes: Students will be familiar with basics of design and analysis of efficient algorithms and data structures. The students will be able to analyze the time complexity of basic algorithms, to use basic algorithmic techniques (sorting and searching arrays), use basic efficient data structures and understand their implementation.					
Class syllabus: Asymptotic running time analysis, methods of estimation, notation. Sorting: meargsort, heapsort, quicksort; sorting in linear time. Data structures: priority queues, hash tables, binary search trees and their balancing. Efficient algorithm design techniques: dynamic programming, greedy algorithms.					
Recommended literature: Introduction to algorithms / Thomas H. Cormen ... [et al.]. Cambridge, Mass. : MIT Press, 2001 Algorithms in C : Parts 1-4 : Fundamentals, data structures, sorting, searching / Robert Sedgewick. Boston : Addison-Wesley, 1998 Custom course notes published at the course website					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 478					
A	B	C	D	E	FX
42,05	13,81	14,44	12,76	11,51	5,44
Lecturers: RNDr. Michal Foríšek, PhD.					

Last change: 18.02.2020
Approved by:

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAI+KAMŠ/1- DAV-990/20	Course title: Bachelor Thesis Defense
Number of credits: 12	
Educational level: I.	
State exam syllabus:	
Last change: 18.02.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI+KAMŠ/1- DAV-921/20		Course title: Bachelor Thesis Seminar (1)			
Educational activities: Type of activities: seminar Number of hours: per week: 1 per level/semester: 14 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Bronislava Brejová, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI+KAMŠ/1- DAV-922/20		Course title: Bachelor Thesis Seminar (2)			
Educational activities: Type of activities: seminar Number of hours: per week: 1 per level/semester: 14 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Bronislava Brejová, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KEF/1-DAV-311/20		Course title: Big Data Analysis in Physics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 3 per level/semester: 42 / 42 Form of the course: on-site learning					
Number of credits: 7					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-DAV-112/20 - Calculus (2)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Peter Markoš, DrSc., prof. Ing. Roman Martoňák, DrSc.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-AIN-407/15		Course title: Brain and Mind			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1., 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 133					
A	B	C	D	E	FX
48,87	19,55	13,53	9,77	1,5	6,77
Lecturers: RNDr. Barbora Cimrová, PhD., doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-DAV-102/20		Course title: Calculus (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 4 / 2 per level/semester: 56 / 28 Form of the course: on-site learning					
Number of credits: 7					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 27					
A	B	C	D	E	FX
22,22	37,04	7,41	18,52	7,41	7,41
Lecturers: doc. Mgr. Richard Kollár, PhD., MSc. Andrej Baláž					
Last change: 17.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-DAV-112/20		Course title: Calculus (2)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 4 / 2 per level/semester: 56 / 28 Form of the course: on-site learning					
Number of credits: 7					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-DAV-102/20 - Calculus (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 14					
A	B	C	D	E	FX
28,57	21,43	7,14	28,57	14,29	0,0
Lecturers: doc. Mgr. Richard Kollár, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-AIN-408/15		Course title: Cognitive Laboratory			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1., 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 38					
A	B	C	D	E	FX
71,05	15,79	5,26	2,63	0,0	5,26
Lecturers: doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI/1-INF-167/15		Course title: Computational Complexity and Computability			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 1 per level/semester: 42 / 14 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements: homework assignments, oral exam					
Learning outcomes: Student will be familiar with basic concepts and results in computational complexity and computability theory.					
Class syllabus: RAM and its variants, register and Turing machines, recursive functions, computations and computability equivalence in different models. Church thesis, existence of undecidable problems. Basic complexity classes and relationships between them, existence of hard problems. NP-hardness, Cook theorem and selected important NP-complete problems, relationship between decision and optimization problems. P vs NP, different approaches to defining efficient algorithms (approximation and randomized algorithms). PSPACE-complete problems.					
Recommended literature: Computational complexity : A modern approach / Sanjeev Arora, Boaz Barak. New York : Cambridge University Press, 2009					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 131					
A	B	C	D	E	FX
48,09	7,63	16,79	12,98	12,21	2,29
Lecturers: doc. RNDr. Dana Pardubská, CSc.					
Last change: 18.09.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KEF/1-AIN-140/16		Course title: Computer Principles - Hardware			
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KEF/1-AIN-140/15					
Course requirements: Scale of assessment (preliminary/final): 50/50					
Learning outcomes:					
Class syllabus: Principles of DDL, DTL a TTL circuits. Combinational and sequential schemes, their optimalization and practical applications (RS- and D- type flip-flops, counter and shift register). Multiplexer and demultiplexer, paralel-serial code converter, RS232 interface, statical RAM memory, delta modulation and simple digital sound recording.					
Recommended literature: faculty guidance documents					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 472					
A	B	C	D	E	FX
22,46	30,51	18,43	8,9	9,75	9,96
Lecturers: RNDr. Ján Greguš, PhD., doc. RNDr. František Kundracik, CSc.					
Last change: 21.09.2018					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KI/2-INF-178/15		Course title: Cryptology (1)			
Educational activities: Type of activities: lecture Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 3.					
Educational level: I., II.					
Prerequisites:					
Course requirements: Homewrok assignments, test, final written exam Scale of assessment (preliminary/final): 0/100					
Learning outcomes: The students will have the knowledge of basic cryptographic constructions; they will understand security guarantees provided by these constructions, and assumptions required for their security. The students will be able to choose a suitable cryptographic construction for given application / information system.					
Class syllabus: symmetric ciphers (block and stream ciphers), asymmetric ciphers, underlying problems for asymmetric constructions, hash functions, message authentication codes, digital signatures, passwords, secret sharing schemes, cryptographic protocols and related attacks, zero-knowledge proofs					
Recommended literature: Cryptography : Theory and practice / Douglas R. Stinson. Boca Raton, Fla. : Chapman & Hall, 2006 Cryptography, An Introduction: Third Edition / Nigel Smart (http://www.cs.bris.ac.uk/~nigel/Crypto_Book/)					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 69					
A	B	C	D	E	FX
13,04	10,14	17,39	21,74	28,99	8,7
Lecturers: doc. RNDr. Martin Stanek, PhD.					
Last change: 21.08.2015					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-DAV-202/20		Course title: Data Management			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 1 / 2 per level/semester: 14 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Antirequisites: FMFI.KI+KAI/2-INF-185/15					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 73					
A	B	C	D	E	FX
41,1	23,29	15,07	9,59	8,22	2,74
Lecturers: doc. Mgr. Bronislava Brejová, PhD., doc. Mgr. Tomáš Vinař, PhD., Mgr. Vladimír Boža, PhD.					
Last change: 18.02.2020					
Approved by:					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAI+KAMŠ/1- DAV-950/20	Course title: Data Science
Number of credits: 4	
Educational level: I.	
State exam syllabus:	
Last change: 18.02.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-DAV-312/20		Course title: Data Science - Generic Subject			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Tomáš Vinař, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAG+KI/1- DAV-105/20		Course title: Data Visualisation			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: FMFI.KAI/1-AIN-130/16 - Programming (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
76,92	19,23	0,0	0,0	0,0	3,85
Lecturers: doc. Mgr. Bronislava Brejová, PhD., Mgr. Martina Bátorová, PhD.					
Last change: 14.02.2021					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KI/1-DAV-301/20		Course title: Database Systems			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Tomáš Plachetka, Dr., doc. RNDr. Ján Mazák, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI/1-INF-310/00		Course title: Design of Efficient Algorithms			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 1 per level/semester: 42 / 14 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: FMFI.KI/1-INF-220/00 - Algorithms and Data Structures,(FMFI.KI/1-INF-160/00 - Introduction to Combinatorics and Graph Theory and leboFMFI.KAI+KI/1-DAV-101/20 - Discrete Mathematics)					
Course requirements: homework, test, oral final exam Scale of assessment (preliminary/final): 30/70					
Learning outcomes: Student will be able to apply basic methods of efficient algorithm design and to analyze time complexity of algorithms					
Class syllabus: The dictionary problem (2-3 trees, hashing). Union/Find-Set problem. Algorithms for finding the shortest paths and the minimum spanning trees in graphs. The principles of efficient algorithm design (including particular applications) . Divide and conquer. Dynamic programming. Greedy algorithms, Balancedness and the choice of an appropriate data structure. The P and NP classes, polynomial reducibility (Cook's theorem) and NP-complete problems, Approximation algorithms. String matching algorithms,					
Recommended literature: Introduction to algorithms / Thomas H. Cormen ... [et al.]. Cambridge, Mass. : MIT Press, 2001					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 468					
A	B	C	D	E	FX
47,01	22,65	14,32	10,47	4,49	1,07
Lecturers: Mgr. Michal Anderle, PhD., Mgr. Askar Gafurov, Mgr. Adrián Goga					
Last change: 08.02.2018					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI+KI/1-DAV-101/20		Course title: Discrete Mathematics			
Educational activities: Type of activities: course Number of hours: per week: 6 per level/semester: 84 Form of the course: on-site learning					
Number of credits: 8					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
15,38	11,54	15,38	42,31	11,54	3,85
Lecturers: doc. RNDr. Edita Mačajová, PhD., doc. RNDr. Tatiana Jajcayová, PhD., doc. Mgr. Tomáš Vinař, PhD., Mgr. Martina Bodišová, Mgr. Jozef Rajník					
Last change: 17.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-380/00		Course title: Econometrics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 6.					
Educational level: I., II.					
Prerequisites: FMFI.KAMŠ/1-EFM-330/00 - Statistical Methods and leboFMFI.KAMŠ/2-MMN-106/15 - Computer Statistics and leboFMFI.KAMŠ/2-PMS-107/15 - Regression Models and leboFMFI.KAMŠ/1-DAV-201/20 - Fundamentals of Probability and Statistics and leboFMFI.KAMŠ/1-PMA-510/00 - Basics of Mathematical Statistics					
Course requirements: Scale of assessment (preliminary/final): 30/70					
Learning outcomes:					
Class syllabus: General framework of model building in the applications. Classical linear regression model. Methods of parameter estimation and their properties. Ordinary Least Squares method and theory. Regression diagnostics. Stochastic specification and classical assumptions of the linear regression model. Inference in the linear regression model. Violating assumptions in the classical linear regression model, detection and correction: heteroskedasticity and autocorrelation. Generalized least squares method. Multikollinearity. Stochastic regressors, autoregression. Instrumental variables method. Introduction to simultaneous equations. Qualitative variables, logistic regression. Overview of other methods.					
Recommended literature: Faraway, J. J., Linear models with R, Chapman&Hall/CRC, 2005. Johnston, J. and DiNardo, J., Econometric methods, McGraw&Hill, 4-th. ed, 1997.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1126					
A	B	C	D	E	FX
27,53	15,9	18,65	17,05	17,41	3,46
Lecturers: Mgr. Ján Somorčík, PhD., Mgr. Samuel Rosa, PhD.					
Last change: 12.10.2016					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-233/13		Course title: English Conversation Course (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I., II.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: The content of the course is general English. The language level is B2/C1 (Upper-Intermediate/Lower Advanced).					
Recommended literature: Selection of materials from Inside Out Upper-Intermediate, Cutting Edge Upper-Intermediate, New English File Upper-Intermediate, British and American newspapers and journals Recordings: authentic and semi-authentic (source: BBC, CNN, coursebook recordings)					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 193					
A	B	C	D	E	FX
65,28	13,99	7,25	2,07	1,55	9,84
Lecturers: Mgr. Aneta Barnes					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-234/13		Course title: English Conversation Course (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4., 6.					
Educational level: I., II.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: The course is a follow-up to the Conversation Course in English (1). The content of the course is general English. The language level is B2/C1 (Upper-Intermediate/Lower Advanced).					
Recommended literature: Selection of materials from Inside Out Upper-Intermediate, Cutting Edge Upper-Intermediate, New English File Upper-Intermediate, British and American newspapers and journals Recordings: authentic and semi-authentic (source: BBC, CNN, coursebook recordings)					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 119					
A	B	C	D	E	FX
73,11	15,13	4,2	1,68	0,0	5,88
Lecturers: Mgr. Aneta Barnes					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-131/00		Course title: English Language (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: On entering the first semester, students’ knowledge of English is tested and they are divided into groups according to the results of the placement test. In the groups of pre-intermediate and intermediate students, fundamentals of technical English are taught. Advanced students take classes of technical English for their field of study: English for mathematics, for physics, for computer science, English for management and economic and financial mathematics.					
Recommended literature: Zemanová, A.: Anglický jazyk pre študentov FMFI UK. Kurz pre mierne pokročilých. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-2829-6 Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3 Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1 Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8 Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 5498					
A	B	C	D	E	FX
30,25	23,85	18,66	12,7	7,57	6,98
Lecturers: Mgr. Eva Foltánová, Mgr. Ing. Jana Kočvarová, Mgr. Ľubomíra Kožehubová, Mgr. Alexandra Maďarová, PhDr. Alena Zemanová, Mgr. Aneta Barnes					

Last change: 22.02.2019
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-132/00		Course title: English Language (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: This is a continuation of the course English (1) designed for pre-intermediate students. Fundamental vocabulary is presented through selected topics in mathematics, physics and informatics. The lessons also contain revision of elementary grammar. Generally, it is a necessary preliminary to advanced programs.					
Recommended literature: Zemanová, A.: Anglický jazyk pre študentov FMFI UK. Kurz pre mierne pokročilých. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-2829-6					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1553					
A	B	C	D	E	FX
22,22	20,48	24,47	15,58	10,62	6,63
Lecturers: PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Mgr. Ľubomíra Kožehubová, Mgr. Eva Foltánová, Mgr. Aneta Barnes					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-231/00		Course title: English Language (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject continues the program of English (2). Students take classes of special English for their field of study: English for mathematics, English for physics, English for computer science, English for management and economic and financial mathematics. The subject requires advanced knowledge of general English.					
Recommended literature: Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3 Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1 Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8 Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1283					
A	B	C	D	E	FX
16,29	19,33	22,92	18,08	17,69	5,69
Lecturers: PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Mgr. Ľubomíra Kožehubová, Mgr. Eva Foltánová, Mgr. Aneta Barnes					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-232/10		Course title: English Language (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Students take classes of special English for their field of study: English for mathematics, English for physics, English for computer science, English for management and economic and financial mathematics.					
Recommended literature: Erdélyi L., Gombárik P.: Anglický jazyk pre študentov FMFI UK. Aplikovaná matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3216-3 Gombárik P.: Anglický jazyk pre študentov FMFI UK. Matematika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3207-1 Klátiková E.: Anglický jazyk pre študentov FMFI UK. Informatika. Univerzita Komenského v Bratislave, Bratislava 2012, ISBN 978-80-223-3196-8 Alena Zemanová: Anglický jazyk pre študentov FMFI UK. Fyzika. Univerzita Komenského v Bratislave, Bratislava 2014, 92 strán, ISBN: 978-80-223-3477-8.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 3045					
A	B	C	D	E	FX
28,34	28,37	20,72	11,07	5,68	5,81
Lecturers: Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, PhDr. Alena Zemanová, Mgr. Ľubomíra Kožehubová, Mgr. Eva Foltánová, Mgr. Aneta Barnes					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-370/00		Course title: Financial Mathematics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 5.					
Educational level: I., II.					
Prerequisites: FMFI.KAMŠ/1-EFM-250/00 - Mathematical Analysis (4) and leboFMFI.KAMŠ/1-DAV-102/20 - Calculus (1)					
Course requirements:					
Learning outcomes:					
Class syllabus: Coupon and zero-coupon bonds, term structure of interest rates, bootstrap method, yield to maturity, forward rates, duration. Binomial tree model, risk-neutral probabilities, risk-neutral valuation formula, Black-Scholes formula, pricing of american options. Aversion to risk, properties of utility functions, utility functions and mean-variance analysis, the problem of Markowitz, Capital Asset Pricing Model (CAMP), factor models.					
Recommended literature: Baxter M., Rennie A.: Financial Calculus Hull J.: Options, Futures and Other Derivatives Luenberger D.: Investment Science					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 581					
A	B	C	D	E	FX
58,0	22,38	10,15	6,02	3,1	0,34
Lecturers: doc. Mgr. Igor Melicherčík, PhD., Mgr. Tatiana Jašurková					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KI/1-INF-215/14		Course title: Formal Languages and Automata (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 2 per level/semester: 42 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements: homework, test, written and oral final exam Scale of assessment (preliminary/final): 30/70					
Learning outcomes: Students will be familiar with basic models of automata and grammars, and they will be able to compare their computational power. They will understand algorithmic problem (un)decidability and a formal definition of computational complexity of a problem.					
Class syllabus: Chomsky hierarchy of formal grammars. Finite state automata and pushdown automata. Basic properties of regular and context-free languages, regular expressions. Turing machines. Undecidable problems. Introduction to computational complexity theory.					
Recommended literature: The Mathematical theory of context free languages / Seymour Ginsburg. New York : McGraw Hill, 1966 Formálne jazyky a automaty / John E. Hopcroft, Jeffrey D. Ullman ; preložili Branislav Rován, Peter Mikulecký. Bratislava : Alfa, 1978 Introduction to Automata Theory, Languages, and Computation / John E. Hopcroft, Rajeev Motwani, Jeffrey D. Ullman. Boston : Pearson/Addison-Wesley, 2007					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 539					
A	B	C	D	E	FX
21,15	4,82	3,71	21,15	34,69	14,47
Lecturers: prof. RNDr. Branislav Rován, PhD., RNDr. Šimon Sádovský, Mgr. Lukáš Kiss					
Last change: 08.02.2018					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI/2-INF-186/15		Course title: Formal Languages and Automata (2)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 2 per level/semester: 42 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Recommended prerequisites: 1-INF-215 and 1-INF-220					
Course requirements: Homework assignments and semester tests, final written and oral exam. Scale of assessment (preliminary/final): 30/70					
Learning outcomes: Students are familiar with properties of all classes in the Chomsky hierarchy. They understand the concept of decidability and complexity and know decidability status of basic problems for individual classes of the Chomsky hierarchy. They are familiar with basic methods of syntactic analysis and their connection to deterministic push-down automata.					
Class syllabus: Context-sensistive grammars, linear bounded automata. Properties of language classes in the Chomsky hierarchy. Decidable and undecidable problems in the Chomsky hierarchy. Deterministic context-free grammars and basic methods of syntactic analysis. Computational complexity. Fundamental complexity classes and their properties.					
Recommended literature: Introduction to Automata Theory, Languages, and Computation / John E. Hopcroft, Rajeev Motwani, Jeffrey D. Ullman. Boston : Pearson/Addison-Wesley, 2007 Gries, David. "Compiler construction for digital computers." Wiley (1971).					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 64					
A	B	C	D	E	FX
54,69	4,69	17,19	10,94	7,81	4,69
Lecturers: prof. RNDr. Branislav Rován, PhD., RNDr. Šimon Sádovský, Mgr. Lukáš Kiss					

Last change: 10.05.2016
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-561/14		Course title: Free optimisation methods			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: (FMFI.KAG/1-EFM-160/12 - Linear Algebra and Geometry (2) and leboFMFI.KAG/1-DAV-104/20 - Linear Algebra),(FMFI.KAMŠ/1-EFM-130/00 - Mathematical Analysis (2) and leboFMFI.KAMŠ/1-DAV-102/20 - Calculus (1))					
Course requirements: Project, exam test Grading:: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 40/60					
Learning outcomes: Students have mastered classical and modern methods of free optimization for functions of one and several variables, theoretical and practical aspects of these methods and their significance for solving nonlinear programming problems with boundaries.					
Class syllabus: Introduction to the subject, Classification of optimization problems, Lagrange function and its generalization, transformation of optimization problems, Methods of minimizing the function of one variable (Minimum interval approximation methods, Minimum point approximation methods), Classical methods for minimizing n-variable function (Classification of methods and basic algorithmic schemes, Cauchy's method of the highest gradient and relaxation method, Newton's method and modified Newton's method), Modern methods for minimizing the function of n variables (Conjugate gradient method, Quasi Newton method, Broyden class and other parametric classes of Quasi Newton formulas)					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 244					
A	B	C	D	E	FX
22,95	14,75	19,67	19,67	17,21	5,74
Lecturers: doc. RNDr. Mária Trnovská, PhD.					

Last change: 18.05.2018
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-141/00		Course title: French Language (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: French language is taught at two levels: beginner and intermediate. Students opt for one of them depending on whether they wish to obtain the fundamentals of the language or wish to maintain and/or improve previous knowledge of French.					
Recommended literature: Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 421					
A	B	C	D	E	FX
45,13	20,43	19,48	9,03	1,9	4,04
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-142/00		Course title: French Language (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject continues the program of French language (1) and provides courses of essential and intermediate French language.					
Recommended literature: Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2 Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983 Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 261					
A	B	C	D	E	FX
38,31	25,67	19,92	10,34	2,68	3,07
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-241/00		Course title: French Language (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject provides a course of intermediate French language, covering not only general, but also technical language.					
Recommended literature: Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2 Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983 Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 101					
A	B	C	D	E	FX
37,62	28,71	21,78	6,93	0,99	3,96
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-242/00		Course title: French Language (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject provides a course of intermediate French covering not only general, but also technical French language.					
Recommended literature: Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2 Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983 Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008 Zarha Lahmidi: Sciences-techniques.com, ISBN 209-0331186-0, CLE international, 2005					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 71					
A	B	C	D	E	FX
39,44	33,8	18,31	2,82	1,41	4,23
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-301/15		Course title: Fundamentals of Computer Graphics and Image Processing			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAI+KAGDM/1-AIN-240/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1139					
A	B	C	D	E	FX
23,27	26,43	22,3	12,12	8,17	7,73
Lecturers: doc. RNDr. Milan Ftáčnik, CSc.					
Last change: 21.09.2018					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-251/11		Course title: Fundamentals of Enterprise and Management			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: FMFI.KAI/1-AIN-131/10 - Development of Information Systems and leboFMFI.KI/1-INF-516/15 - Principles of Software Design					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1011					
A	B	C	D	E	FX
29,77	27,7	19,49	11,67	8,61	2,77
Lecturers: Ing. Peter Filo, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTF/1-MAT-815/00		Course title: Fundamentals of Physics (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites: FMFL.KMANM/1-MAT-250/14 - Mathematical Analysis (4) and leboFMFL.KAMŠ/1-DAV-102/20 - Calculus (1)					
Course requirements: Scale of assessment (preliminary/final): 30/70					
Learning outcomes:					
Class syllabus: Mechanics: Procedure is largely based on the scalar quantities: kinetic energy, potential energy, virtual work and in many cases the power function. Each of these can be expressed, usually without difficulty, in any suitable coordinates. Of course the vector nature of force, velocity, acceleration etc., must be taken account of in the treatment of dynamical problems. Fortunately the basic idea involved in the derivation of Lagrange's equations are simple and easy to understand. The application of Lagrange's equations to actual problems is remarkably simple even for systemswhich may be quite complex. Except for very elementary problems, the procedure is in general much simpler and less time consuming than the than the "concise", "elegant" or special methods found in many current (physical) texts. During the lecture are presented as well as the examples, problems and suggested experiments.					
Recommended literature: M. Fecko: Introduction to theoretical physics. Arthur Beiser: Introduction to the modern physics.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 44					
A	B	C	D	E	FX
70,45	15,91	9,09	4,55	0,0	0,0
Lecturers: Mgr. Juraj Tekel, PhD.					
Last change: 02.06.2015					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTF/1-MAT-825/00		Course title: Fundamentals of Physics (2)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: FMFI.KTF/1-MAT-815/00 - Fundamentals of Physics (1)					
Course requirements: Scale of assessment (preliminary/final): 20/80					
Learning outcomes:					
Class syllabus: We present the concepts of "state of a system" and the "eigenstate", which then straightforwardly lead to the basic equation of motion, i.e. to the Schroedinger equation; and, by way of a number of classic, historically important observations concerning the quantization of the systems and the various radiation laws, we infer the duality of waves and particles. Quantum mechanics is then further developed with respect to the fundamental problems (uncertainty relations, quantization of classical systems, spin, etc.); applications as the harmonic oscillator, hydrogen atom, hydrogen-like atoms and a lot of examples and exercises.					
Recommended literature: R. Liboff: Introductory quantum mechanics W. Greiner: Quantum mechanics D. Griffith: Introduction to quantum mechanics					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Juraj Tekel, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-DAV-201/20		Course title: Fundamentals of Probability and Statistics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 3 / 2 per level/semester: 42 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Radoslav Harman, PhD., Mgr. Lenka Filová, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAFZM/1-OZE-374/15		Course title: Geographical Information Systems			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 3					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Milan Lapin, CSc., RNDr. Martin Kremler, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-151/00		Course title: German Language (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: German language is taught at three levels: beginner, intermediate and advanced. Students opt for one of them depending on whether they need to learn the fundamentals or maintain and/or improve their previous knowledge.					
Recommended literature: Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 717					
A	B	C	D	E	FX
35,43	27,62	19,8	9,21	2,79	5,16
Lecturers: Mgr. Alexandra Maďarová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-152/00		Course title: German Language (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The course continues the program of German language (1). German language is taught at three levels: beginner, intermediate, advanced.					
Recommended literature: Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 468					
A	B	C	D	E	FX
35,47	20,51	20,73	13,46	3,42	6,41
Lecturers: Mgr. Alexandra Maďarová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-251/00		Course title: German Language (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject continues the program of German language (2). It provides a course of intermediate and advanced German language.					
Recommended literature: Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe. Aus moderner Technik und Naturwissenschaft, 1999, Max Hueber Verlag, D-85737, ISBN 3-19-001629-1					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 158					
A	B	C	D	E	FX
39,24	26,58	21,52	6,96	2,53	3,16
Lecturers: Mgr. Alexandra Maďarová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJP/1-MXX-252/00		Course title: German Language (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject continues the program of German language (3). It provides a course of intermediate and advanced German language.					
Recommended literature: Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe. Vilma Václavíková: Nemčina pre študentov MFF UK, Vysokoškolský učebný text pre potrebu študentov KJP, č. 9793/1982 C VIII/2, 1983					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 86					
A	B	C	D	E	FX
39,53	25,58	12,79	12,79	3,49	5,81
Lecturers: Mgr. Alexandra Maďarová					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAG/1-MAT-460/00		Course title: Graph Theory			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Complexity of algorithms and problems. P, NP and NP- complete problems. Hamiltonian cycles in graphs, in cubic graphs, the Four-Colour Theorem, Chvátal's theorem, the Travelling Sales-man Problem. The groups of automorphisms of a graph. Vertex-transitive, edge-transitive graphs. Cayley graphs.					
Recommended literature: J. Plesník: Grafové algoritmy, Veda, Bratislava, 1983 J.A. Bandy, U.S.R. Murphy: Graph Theory with Applications, North-Holland, New York - Amsterdam - London, 1976					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 35					
A	B	C	D	E	FX
68,57	5,71	17,14	5,71	2,86	0,0
Lecturers: RNDr. Jana Tomanová, CSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-MXX-491/15		Course title: Integrated Education of People with Disabilities			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 39					
A	B	C	D	E	FX
87,18	10,26	0,0	0,0	0,0	2,56
Lecturers: PaedDr. Elena Mendelová, CSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-DAV-313/20		Course title: Internship			
Educational activities: Type of activities: practice Number of hours: per week: per level/semester: 300s Form of the course: on-site learning					
Number of credits: 10					
Recommended semester: 5., 6..					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Tomáš Vinař, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAI/1-AIN-304/15	Course title: Introduction to Artificial Intelligence
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning	
Number of credits: 6	
Recommended semester: 5.	
Educational level: I.	
Prerequisites:	
Course requirements: Students can gain 25% for exercises, 10% for tests and 15% for the project. Students have to earn at least half from each of these. The final exam is worth 50% of the total mark. If students do not meet the minimal condition from the semester, then they cannot pass the exam. Scale of assessment (preliminary/final): Practical work 50% (25% for exercises, 10% for tests, 15% for the project).50% for the final exam.Grading: A 91-100%, B 81-90%, C 71-80%, D 61-70%, E 51-60%, Fx < 51%	
Learning outcomes: Students get the basic insight into artificial intelligence, that can be further extended in the master studies. The course covers the basics of symbolic and subsymbolic artificial intelligence. The theory is combined with numerous practical exercises.	
Class syllabus: Definition of AI, description of simple rational agents. Logical agents, uninformed and informed search in solution space, the basics of game theory, problems with restrictive conditions, optimization, more complex agents capable of inference and learning. Propositional logic and inference using the knowledge base. Learning from examples: supervised learning, classification and regression, multilayer feedforward neural network and its applications, model selection, generalization. Nonparametric models, nearest neighbor methods, clustering, self-organization.	
Recommended literature: Stuart Russell and Peter Norvig, Artificial Intelligence: A Modern Approach (3rd edition), Prentice Hall, USA, 2010.	
Languages necessary to complete the course: English, Slovak	
Notes:	

Past grade distribution					
Total number of evaluated students: 105					
A	B	C	D	E	FX
12,38	18,1	20,0	18,1	15,24	16,19
Lecturers: prof. RNDr. Ľubica Beňušková, PhD., doc. RNDr. Mária Markošová, PhD.					
Last change: 23.01.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAG/1-MAT-495/00		Course title: Introduction to Coding Theory			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Introduction to Coding Theory and Cryptography. Coding theory for the "ideal" communication channel (definitions and examples, concepts of encoding and decoding, construction of some simple codes, the shortest code, block codes etc.) Introduction to the theory of error-correcting codes (the minimum distance of a nontrivial code, detection and correction of transmitted errors, information symbols and parity check symbols). Introduction to the theory of linear codes. (generator matrix and parity check matrix).					
Recommended literature: J. Adámek: Coding theory, SNTL, Praha 1989 (in Czech)					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 60					
A	B	C	D	E	FX
88,33	3,33	3,33	1,67	1,67	1,67
Lecturers: doc. RNDr. Róbert Jajcay, DrSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI-FM.KEF/1-MMN-270/00		Course title: Introduction to Financial Management			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: Categories of financial decision making of a firm; problems of gaining and allocating financial resources of a firm capital, approaches to capital structure creation; financial analysis methods, financial planning methods of a firm and firm financing in non-standard environment.					
Recommended literature: K. Vlachynský a kol.: Podnikové financie, Súvaha, 1997. K. Vlachynský a kol.: Finančný manažment, Bratislava 1996. R. A. Brealey - S. C. Myers: Teorie a praxe firemních financí, Victoria Publishing, Praha 1993. J. Valach a kol.: Finanční řízení a rozhodování podniku, Ekopres, Praha 1997. S. B. Bloch - G. A. Hir: Foundations of Financial Management, IRWIN, Inc., 1992.					
Languages necessary to complete the course: English					
Notes:					
Past grade distribution Total number of evaluated students: 501					
A	B	C	D	E	FX
23,75	29,74	22,16	13,57	7,78	2,99
Lecturers: prof. RNDr. Ing. Ľudomír Šlahor, CSc., PhDr. Daniela Majerčáková, PhD., MBA					
Last change: 07.03.2018					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KI/1-INF-520/00	Course title: Introduction to Information Security
Educational activities: Type of activities: lecture Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning	
Number of credits: 4	
Recommended semester: 6.	
Educational level: I.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus: The role of information security. The major security attributes of information (confidentiality, availability, authenticity, integrity, privacy, etc.) Basic notions of information security (system, asset, threat, vulnerability, risk). Building a new or securing an existing IT system. Security projects (description of the system and of its environment, identification of relevant threats, qualitative risk analysis, contrameasures). Risk management (incident handling, disaster recovery, business continuity planning). Management of information security. Evaluation and certification of IT system/product. Introduction to cryptology and PKI.	
Recommended literature: An Introduction to Computer Security. The NIST Handbook., volume 800-12 of NIST Special Publication. NIST, 1996. Swanson M. Guide for Developing Security Plans for Information Technology Systems, volume 800-18 of NIST Special Publication. NIST, 1998. Swanson M. and Guttman B. Generally Accepted Principles and Practices for Securing Information Technology Systems, volume 800-14 of NIST Special Publication. NIST, 1996. International Standard ISO/IEC 17799, Information technology - Code of practice for information security management,. ISO/IEC, 2000. BS 7799 Information Security management - Part 2: Specification for information security management systems, Version 4.4 Draft for public comment, Bsi, 2002 Common Methodology for Information Technology Security Evaluation, Introduction and General Model, volume 1 of CEM 97/017. ISO/IEC, 1997. International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Annexes, volume 2a. ISO/IEC, 1998. International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Introduction and General Model, volume 1. ISO/IEC, 1998. International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation, Security Assurance Requirements, volume 3. ISO/IEC, 1998.	

International Standard ISO/IEC 15408 Common Criteria for Information Technology Security Evaluation. Security Functional Requirements, volume 2. ISO/IEC, 1998.
Common Methodology for Information Technology Security Evaluation, Evaluation Methodology, volume 2 of CEM 99/045. ISO/IEC, 1999.
Stoneburner G., Goguen A., and Feringa A. Risk Management Guide for Information Technology Systems. Recommendations of the National Institute of Standards and Technology, volume 800-30 of NIST Special Publication. NIST, 2001.

Languages necessary to complete the course:

Notes:

Past grade distribution

Total number of evaluated students: 954

A	B	C	D	E	FX
12,05	10,38	22,12	33,23	21,7	0,52

Lecturers: doc. RNDr. Daniel Olejár, PhD., RNDr. Michal Rjaško, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAFZM/1-OZE-303/10		Course title: Introduction to Meteorology, Climatology and Hydrology			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 46					
A	B	C	D	E	FX
41,3	34,78	15,22	6,52	2,17	0,0
Lecturers: prof. RNDr. Milan Lapin, CSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KDMFI/1-AIN-112/15		Course title: Introduction to Web Technologies			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KZVI/1-AIN-610/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 2187					
A	B	C	D	E	FX
41,38	14,45	14,13	11,71	8,82	9,51
Lecturers: PaedDr. Roman Hrušecký, PhD., RNDr. Marek Nagy, PhD.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KJFB/1-BMF-331/18		Course title: Introductory Biostatistics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KJFB/1-BMF-331/15 and FMFI.KJFB/1-BMF-331/15					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 49					
A	B	C	D	E	FX
44,9	36,73	12,24	4,08	2,04	0,0
Lecturers: doc. RNDr. Iveta Waczulíková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-AIN-406/15		Course title: Language and Cognition			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2., 4., 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 95					
A	B	C	D	E	FX
28,42	27,37	20,0	14,74	3,16	6,32
Lecturers: doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAG/1-DAV-104/20		Course title: Linear Algebra			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 4 / 2 per level/semester: 56 / 28 Form of the course: on-site learning					
Number of credits: 7					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
34,62	26,92	23,08	7,69	7,69	0,0
Lecturers: Mgr. Martin Niepel, PhD., doc. RNDr. Róbert Jajcay, DrSc.					
Last change: 17.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1- EFM-220/00		Course title: Linear Programming			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites: (FMFI.KAG/1-MAT-160/15 - Linear Algebra and Geometry (2) and leboFMFI.KAG/1-EFM-160/12 - Linear Algebra and Geometry (2) and leboFMFI.KAG/1-DAV-104/20 - Linear Algebra),(FMFI.KAMŠ/1-EFM-130/00 - Mathematical Analysis (2) and leboFMFI.KAMŠ/1-DAV-102/20 - Calculus (1))					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: LP formulations of some real-life problems. The geometry of LP problems (graphic solutions, polyhedra, faces and their representations). The simplex method (primal, dual and revised versions). Duality theory (basic theorems), its applications and economic interpretation. Parametric programming and its applications (multiple criteria optimization, fractional programming). Postoptimization and sensitivity analysis. Transportation problem. About non-simplex methods for LP.					
Recommended literature: J. Plesník, J. Dupačová, M. Vlach: Lineárne programovanie, Alfa, Bratislava 1990.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 608					
A	B	C	D	E	FX
16,78	21,05	24,34	20,72	16,45	0,66
Lecturers: doc. RNDr. Mária Trnovská, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-PMA-215/15		Course title: Matrix Algebra for Statisticians			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 59					
A	B	C	D	E	FX
20,34	23,73	25,42	15,25	13,56	1,69
Lecturers: Mgr. Samuel Rosa, PhD.					
Last change: 08.05.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI+KI/1-BIN-301/15		Course title: Methods in Bioinformatics			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I., II.					
Prerequisites:					
Course requirements: Homework assignments, group project, tests, written exam Scale of assessment (preliminary/final): 50/50					
Learning outcomes: Students will be familiar with basic problems and methods in bioinformatics; they will be able to choose an appropriate method for a given biological problem and to interpret its results.					
Class syllabus: Basic concepts from molecular biology, algorithms and machine learning. Sequencing and assembling genomes. Gene finding. Sequence alignment. Evolutionary models and phylogenetic trees. Comparative genomics. RNA structure. Motif finding and gene expression analysis. Protein structure and function. Selected current topics. Students of computer science programs will focus on computer science methods and mathematical modeling of the covered problems. Life science students will focus on understanding and correct application of these methods on real data.					
Recommended literature: Biological sequence analysis : Probabilistic models of proteins and nucleic acids / Richard Durbin ... [et al.]. Cambridge : Cambridge University Press, 1998 Understanding bioinformatics / Marketa Zvelebil, Jeremy O. Baum. New York : Garland Science, 2008					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 129					
A	B	C	D	E	FX
34,11	17,05	20,93	16,28	5,43	6,2

Lecturers: doc. Mgr. Bronislava Brejová, PhD., doc. Mgr. Tomáš Vinař, PhD., Mgr. Askar Gafurov
Last change: 14.09.2020
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-472/20		Course title: Mobile Application Developement			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAI/1-AIN-472/15					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 198					
A	B	C	D	E	FX
26,26	4,55	15,15	18,18	32,32	3,54
Lecturers: RNDr. Peter Borovanský, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-DAV-304/20		Course title: Network Science			
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Richard Kollár, PhD., Mgr. Katarína Boďová, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MAT-240/00		Course title: Numerical Mathematics (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites: FMFI.KMANM/1-MAT-150/00 - Mathematical Analysis (2) and leboFMFI.KMANM/1-INF-150/00 - Mathematical Analysis (2) and leboFMFI.KAMŠ/1-DAV-102/20 - Calculus (1)					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: Position of numerical mathematics in solving of real problems. Concept of stability. Errors and computational arithmetic. The solution of nonlinear equations. Solution of system nonlinear equations. Approximation of functions. Interpolation - Lagrange's and Newton's interpolation polynomial and their errors. Optimal selection of interpolations point. Chebyshev polynomials. Linear and cubic splines. The least square method. Numerical differentiation. Numerical quadrature. The solution of simultaneous linear equations.					
Recommended literature: Lars Eldén, Linde Wittmeyer-Koch: Numerical analysis An Introduction ACADEMIC Press, INC, San Diego, 1990. J. Babušíková, M. Slodička, J. Weisz : Numerická matematika , UK Bratislava, 1999 (skriptá). A. Fillová, A. Valková : Numerická matematika II ,UK Bratislava 1991 (skriptá). S. Míka: Numerické metody algebry, SNTL Praha 1982. P. Přikryl: Numerické metody matematické analýzy, SNTL Praha 1985.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 354					
A	B	C	D	E	FX
25,71	21,19	20,06	12,43	17,8	2,82

Lecturers: Mgr. Jela Babušíková, PhD., Mgr. Ivana Eliašová
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KI/1-DAV-103/20		Course title: Operating Systems and Computer Networks			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 27					
A	B	C	D	E	FX
70,37	18,52	7,41	3,7	0,0	0,0
Lecturers: RNDr. Jaroslav Janáček, PhD., Mgr. Marek Šuppa					
Last change: 17.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-110/00		Course title: Physical Education and Sport (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 0					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: According to the particular sport: practicing of individual game skills in sports like basketball, volleyball, soccer, floorball. Training in the individual sports like swimming, trampoline jumping, rowing and canoeing, aerobic, bodybuiding, command of fundamental technique of sports discipline. To arrange development of coordination abilities, articular mobility and cardiovascular system.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 5337					
A	B	C	D	E	FX
96,03	1,65	0,09	0,0	0,06	2,17
Lecturers: Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, PaedDr. Dana Mašlejová, Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 25.05.2016					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTV/1-MXX-120/00		Course title: Physical Education and Sport (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 0					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Practising offensive and defensive combinations and game at modified rules in collective games such as basketball, volleyball, soccer, floorball. Command of elements of higher difficulty in terms of the level of the activity abilities (crawl stroke, breast stroke, butterfly stroke, trampoline jump, aerobic compositions with steps, fitball, elastic gums, paddling on the running water.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 4537					
A	B	C	D	E	FX
97,07	1,72	0,04	0,04	0,04	1,08
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ondrej Podkonický, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Jana Leginusová, PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-210/00		Course title: Physical Education and Sport (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: To practise game combinations, tactical - mechanical elements in basketball, volleyball, soccer, floorball, ice hockey, badminton, competition rules in the sports specialization.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 2683					
A	B	C	D	E	FX
98,66	0,52	0,07	0,0	0,0	0,75
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mokus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-220/00		Course title: Physical Education and Sport (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Preparation for sport championships of the Faculty in the chosen sport at modified rules. The selection of talented students into the teams of the University and Faculty leagues and other faculty sport events.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 2425					
A	B	C	D	E	FX
98,72	0,16	0,08	0,04	0,0	0,99
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ladislav Mókus, Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-310/00		Course title: Physical Education and Sport (5)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Preparation and participation of individuals and teams in the system of university sport competitions and sport events.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1775					
A	B	C	D	E	FX
99,04	0,39	0,11	0,0	0,0	0,45
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ladislav Mókus, Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-320/00		Course title: Physical Education and Sport (6)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Using the communication in the physical education and sport and organizing the sport championships to achieve expressive motion of the sport and health in a valuable orientation the students.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1545					
A	B	C	D	E	FX
99,03	0,26	0,13	0,0	0,0	0,58
Lecturers: PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI+KAMŠ/1- DAV-302/20		Course title: Principles of Data Science			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Tomáš Vinař, PhD., doc. Mgr. Radoslav Harman, PhD., Mgr. Vladimír Boža, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI/1-INF-516/15		Course title: Principles of Software Design			
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KI/1-INF-516/10					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 234					
A	B	C	D	E	FX
43,59	19,66	14,96	9,83	8,55	3,42
Lecturers: doc. RNDr. Robert Lukoťka, PhD.					
Last change: 04.10.2016					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-PMA-551/14		Course title: Probability Distributions			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-MAT-281/00 - Probability and Statistics (1) and leboFMFI.KAMŠ/1-INF-435/13 - Probability and Statistics and leboFMFI.KAMŠ/1-UMA-302/15 - Probability Measure and Mathematical Statistics (1) and leboFMFI.KAMŠ/1-DAV-201/20 - Fundamentals of Probability and Statistics					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 37					
A	B	C	D	E	FX
48,65	21,62	21,62	0,0	5,41	2,7
Lecturers: doc. Mgr. Ján Mačutek, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-130/16		Course title: Programming (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 4 / 4 per level/semester: 56 / 56 Form of the course: on-site learning					
Number of credits: 9					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAI/1-AIN-130/13					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 828					
A	B	C	D	E	FX
26,33	10,27	9,42	8,09	15,22	30,68
Lecturers: RNDr. Andrej Blaho, PhD., PaedDr. Daniela Bezáková, PhD., PaedDr. Andrea Hrušecká, PhD.					
Last change: 18.09.2018					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-170/13		Course title: Programming (2)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: FMFI.KAI/1-AIN-130/16 - Programming (1) and leboFMFI.KAI/1-AIN-130/16 - Programming (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1372					
A	B	C	D	E	FX
29,66	8,53	11,08	12,39	20,99	17,35
Lecturers: RNDr. Andrej Blaho, PhD.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAI/1-AIN-171/10	Course title: Programming (3)
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 3.	
Educational level: I.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus: <ul style="list-style-type: none"> - Data structures, Functions, Global and Local Variables - Structures, Classes, Types - Objects, Polymorphism, Object Oriented Design - Methods, Virtual Methods and Classes, Arguments - Constructors, Destructors - Operators and Overloading - Class Hierarchies, Abstract Classes, Inheritance - Pointers and Pointer Arithmetic - Streams - Templates and STL - Exceptions - Parallelism 	
Recommended literature: <p>Gottschling, Peter, Discovering Modern C++, The C++ In-Depth Series, Addison-Wesley, 2016</p> <p>2. Meyers, Scott, Effective Modern C++, 42 Specific Ways to Improve Your Use of C++11 and C++14, O'Reily, 2015</p> <p>3. Stroustrup, Bjarne, A Tour of C++, The C++ In-Depth Series, Addison-Wesley, 2014</p> <p>4. Meyers, Scott, Effective C++, 50 Specific Ways to Improve Your Programs and Design, Addison-Wesley, 2002</p> <p>5. Eckel, Bruce, Thinking in C++, 2nd ed., Prentice Hall, 2000 (existuje online verzia - http://www.datastore.cz/bruceeckel/)</p> <p>6. Meyers, Scott, More Effective C++: 35 New Ways to Improve Your Programs and Designs, Addison-Wesley, 1995</p> <p>7. Martin, Robert C., Clean Code: A Handbook of Agile Software Craftsmanship, Robert C. Martin Series, Prentice Hall, 2009</p>	

8. Holub, Allen I., Enough Rope to Shoot Yourself in the Foot, Rules fro C and C++ Programming, McGraw-Hill, 1995					
9. Holub, Allen I., The C Companion, Prentice-Hall, Inc., New Jersey, 1987					
Languages necessary to complete the course:					
Notes:					
Past grade distribution					
Total number of evaluated students: 1200					
A	B	C	D	E	FX
28,08	15,58	10,08	12,17	20,0	14,08
Lecturers: Ing. František Gyarfaš, CSc.					
Last change: 22.09.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-172/00		Course title: Programming (4)			
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: - basic programming constructs of the language, comparison with C++ - basic data types and language components - fundamental JAVA libraries - object-orient programming in JAVA - data structures and algoritms - threads and concurrent programs - design of applets and applications with user's interface - JavaFX					
Recommended literature: Eckel,B.: Thinking in Java, Prentice Hall, 1997, Goodrich,M.T, Tamassia,R.: Data Structures and Algorithms in Java, 3rd Ed., John Wiley & Sons, 2004,www.datastructures.net, Herout,P.: Učebnice jazyka Java, Kopp,2003, Weiss M.A.: Data Structures & Problem Solving Using Java, Addison Wesley, 1998.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 568					
A	B	C	D	E	FX
33,45	11,44	19,54	18,49	13,73	3,35
Lecturers: RNDr. Peter Borovanský, PhD.					
Last change: 30.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KDMFI/1-AIN-302/17		Course title: Programming (5)			
Educational activities: Type of activities: course Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 160					
A	B	C	D	E	FX
56,25	5,63	10,63	10,0	11,88	5,63
Lecturers: doc. RNDr. Ľubomír Salanci, PhD.					
Last change: 09.01.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAI/1-AIN-430/15		Course title: Programming Paradigms			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAI/1-AIN-430/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 352					
A	B	C	D	E	FX
23,86	7,1	11,93	19,6	36,93	0,57
Lecturers: RNDr. Peter Borovanský, PhD.					
Last change: 30.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-PMA-751/13		Course title: Programming in R			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes: Using the R environment, writing simple functions and scripts, working with data files.					
Class syllabus: Working with environment and R workspaces, basic operations. Manipulating variables, vectors, matrices and data frames. Conditional statements and flow control. Writing scripts and functions. Elementary statistical operations. Using graphical procedures for data visualization.					
Recommended literature: The art of R programming : A tour of statistical software design / Norman Matloff. San Francisco : No Starch Press, 2011					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 105					
A	B	C	D	E	FX
37,14	16,19	9,52	18,1	17,14	1,9
Lecturers: Mgr. Lenka Filová, PhD.					
Last change: 04.04.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-UXX-340/00		Course title: Recreation Sports in Dially Routine of Pupils and Students			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: To optimize the daily working programme of the students, the programmes of the sport recreational activities and time-off the students. The sport and health in a value orientation of the students. Using developed elemens in an education physical activity and sport preparation. The programmes of the sport recreational activities as a basic precondition of health strengthening, acquirement of physical capability, fitness, regaining of working energy and readiness of body to confront stress situations and dangerous factors as a basic precondition of health strengthening, acquirement of physical capability, fitness, regaining of working energy and readiness of body to confront stress situations and dangerous factors.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 44					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Tomáš Kuchár, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-161/00		Course title: Russian Language (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject provides a course in Russian language for beginners.					
Recommended literature: The textbook has not been published. It is at students' disposal in an electronic format.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 685					
A	B	C	D	E	FX
58,98	16,35	10,51	4,53	1,9	7,74
Lecturers: Viktoria Mirsalova					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-162/00		Course title: Russian Language (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The subject continues the program of Russian language (1) and provides a course of Russian for beginners.					
Recommended literature: The textbook has not been published. It is at students' disposal in an electronic format.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 414					
A	B	C	D	E	FX
65,94	15,22	8,7	3,86	0,97	5,31
Lecturers: Viktoria Mirsalova					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-261/00		Course title: Russian Language (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.					
Recommended literature: The textbook has not been published. It is at students' disposal in an electronic format.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 197					
A	B	C	D	E	FX
70,05	17,77	8,63	2,54	0,0	1,02
Lecturers: Viktoria Mirsalova					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-262/00		Course title: Russian Language (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.					
Recommended literature: The textbook has not been published. It is at students' disposal in an electronic format.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 142					
A	B	C	D	E	FX
75,35	13,38	7,04	2,82	0,7	0,7
Lecturers: Viktoria Mirsalova					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-PMA-760/00		Course title: Sampling Theory			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-MAT-282/00 - Probability and Statistics (2) and leboFMFI.KAMŠ/1-DAV-201/20 - Fundamentals of Probability and Statistics					
Course requirements: Preliminary semester evaluation: test Final examination: written examination Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50%					
Learning outcomes: The student will master basic sampling schemes used in sampling from a finite population. He will be able to find interval estimates for unknown population parameters.					
Class syllabus: Simple random sampling, sampling without and with replacement. Estimate of population mean and proportion. Stratified random sampling. Stratification with proportional allocation. Optimum allocation, Neyman allocation. Systematic sampling. Elements of probabilistic random sampling. Inclusion probabilities, Horwitz-Thompson estimate and its properties. Bernoulli sampling, Poisson sampling.					
Recommended literature: Kalas, J.: Vybrané kapitoly z teórie náhodného výberu, skriptá MFF UK Bratislava 1996. Cochran, W.G. Sampling techniques, Wiley and Sons, New York,1977. Särndal, C. E., Swensson, B., Wretman, J.: Model Assisted Survey Sampling, Springer 1992.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 102					
A	B	C	D	E	FX
29,41	19,61	18,63	14,71	11,76	5,88
Lecturers: doc. RNDr. Katarína Janková, CSc.					
Last change: 28.04.2017					

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAI/2-IKVa-192/19	Course title: Science, Technology and Humanity: Opportunities and Risks
Educational activities: Type of activities: seminar Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 2.	
Educational level: I., II.	
Prerequisites:	
Course requirements: Semestral evaluation: active participation Final evaluation: essay Weight of the final evaluation: 60% To achieve an A, 90% is needed, for B at least 80%, for C 70%, for D, 60% and for an E, at least 50% of overall assessment.	
Learning outcomes: The students will gain awareness of the contemporary and potential future challenges posed by scientific and technological innovations and their impact on human behaviour, culture and society.	
Class syllabus: Big data: privacy, politics and power, Internet of things, its usefulness and threats, Assistant AI and its place in future society, Job market and inequality, Enhancements and human rights and the right to change self and others, Initiatives for responsible research, Artificial minds, Hybridization between species and between AI and organic minds, Future of minds and trans-humanism, Artificial emotional intelligence, An after human era.	
Recommended literature: - S. Russell: Human compatible. Artificial intelligence and the problem of control. Viking, 2019. - J. Havens: Heartificial intelligence. Embracing our humanity to maximize machines. Penguin, 2016. - P. Boddington: Towards a code of ethics for artificial intelligence. Springer, 2017. - M. Shanahan: The technological singularity. MIT Press, 2015. - C. MacKellar, C.: Cyborg Mind: What Brain–Computer and Mind–Cyberspace Interfaces Mean for Cyberneuroethics. Berghahn Books, 2019.	

- G. Bel, J. Gemmell: Total Recall, How the e-Memory Revolution will change everything. Dutton, 2009.
- S. Zuboff: The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. PublicAffairs, 2019.
- C. O'Neil: Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Crown Publishers, 2016.
- M. Tegmark: Life 3.0. Allen Lane, 2017.

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 34

A	B	C	D	E	FX
52,94	17,65	2,94	8,82	8,82	8,82

Lecturers: doc. RNDr. Martin Takáč, PhD., PhDr. Ing. Tomáš Gál, PhD.

Last change: 28.02.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-171/20		Course title: Slovak Language for Foreign Students (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 18					
A	B	C	D	E	FX
50,0	0,0	0,0	0,0	0,0	50,0
Lecturers: Mgr. Aneta Barnes					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-172/20		Course title: Slovak Language for Foreign Students (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 16					
A	B	C	D	E	FX
81,25	0,0	0,0	0,0	0,0	18,75
Lecturers: Mgr. Aneta Barnes					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-271/20		Course title: Slovak Language for Foreign Students (3)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 2					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Aneta Barnes					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-272/20		Course title: Slovak Language for Foreign Students (4)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I., II.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Aneta Barnes					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-PMA-752/14		Course title: Solution methods in probability and statistics			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-MAT-281/00 - Probability and Statistics (1) and leboFMFI.KAMŠ/1-DAV-201/20 - Fundamentals of Probability and Statistics					
Course requirements: Assessment during the term: homework, test Scale of assessment (preliminary/final): 100/0					
Learning outcomes: Student gains skills in applying the knowledge from probability and statistics to solve problems, including real life applications.					
Class syllabus: Combinatorial probability, conditional probabilities and Bayes theorem, discrete and continuous random vectors and their applications.					
Recommended literature:					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 56					
A	B	C	D	E	FX
83,93	8,93	3,57	1,79	1,79	0,0
Lecturers: doc. RNDr. Mgr. Beáta Stehlíková, PhD.					
Last change: 17.05.2018					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-115/15		Course title: Sports in Nature (1)			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 221					
A	B	C	D	E	FX
99,55	0,0	0,45	0,0	0,0	0,0
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Júlia Raábová, PhD.					
Last change: 25.05.2016					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-215/15		Course title: Sports in Nature (2)			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 170					
A	B	C	D	E	FX
93,53	0,0	0,0	0,0	0,0	6,47
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Júlia Raábová, PhD.					
Last change: 25.05.2016					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-216/18		Course title: Sports in Nature (3)			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 19					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Júlia Raábová, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTV/1-MXX-217/18		Course title: Sports in Nature (4)			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 11					
A	B	C	D	E	FX
81,82	0,0	0,0	0,0	0,0	18,18
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Júlia Raábová, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-DAV-303/20		Course title: Statistical Methods			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Katarína Janková, CSc., Mgr. Ján Somorčík, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/2-PMS-129/10		Course title: Stochastic Optimization Methods			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I., II.					
Prerequisites:					
Recommended prerequisites: 2-PMS-123 Stochastic simulation methods					
Course requirements: Evaluation: project, oral exam Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 80/20					
Learning outcomes: Upon satisfactory completion of the course, students will be able to use selected optimization methods. The emphasize is put on heuristic methods of global optimization utilizing random elements (genetic algorithms, simulated annealing, particle swarm optimization, and so on).					
Class syllabus: Applications of linear programming in statistics. Algorithm Nelder-Mead. Simulated annealing. Genetic algorithms. Particle swarm optimization. Basics of constrained global optimization.					
Recommended literature: Algorithmics for hard problems : Introduction to combinatorial optimization, randomization, approximation, and heuristics / Juraj Hromkovič. Berlin : Springer, 2003 Spall JC: Introduction to stochastic search and optimization. Wiley, 2003 Online materials of the lecturer					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 162					
A	B	C	D	E	FX
63,58	19,14	8,02	4,94	1,85	2,47
Lecturers: doc. Mgr. Radoslav Harman, PhD.					

Last change: 08.05.2017
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-133/18		Course title: Supplementary English Course (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 17					
A	B	C	D	E	FX
52,94	35,29	5,88	0,0	5,88	0,0
Lecturers: Mgr. Ing. Jana Kočvarová					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KJP/1-MXX-134/18		Course title: Supplementary English Course (2)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 22					
A	B	C	D	E	FX
54,55	18,18	0,0	13,64	4,55	9,09
Lecturers: Mgr. Ing. Jana Kočvarová					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-DAV-111/20		Course title: Supplementary Tutorials in Mathematics			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Richard Kollár, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KI/2-INF-176/15	Course title: Unix for System Administrators
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning	
Number of credits: 6	
Recommended semester: 3.	
Educational level: I., II.	
Prerequisites:	
Course requirements: Practical assignments (both during the semester and on final exam) Scale of assessment (preliminary/final): 40/60	
Learning outcomes: After completing the course the students will know the principles of UNIX system administration and they will be able to practically carry out the basic duties of a system administrator.	
Class syllabus: users, groups, passwords access permissions for files and directories filesystem structure character and block devices special filesystem objects (symlink, pipe) mounting and unmounting of filesystems to the directory hierarchy (mount, umount, /etc/fstab) creating filesystems system startup and shutdown - /etc/inittab, runlevels job scheduling (cron, at, batch) TCP/IP configuration (ifconfig, route) network services (/etc/services, /etc/inetd.conf, /etc/protocols, /etc/hosts, ...) DNS – client (/etc/resolv.conf) DNS – server NFS Assumptions: good user-level knowledge of UNIX systems, directory hierarchy navigation, creating and editing files (vi, joe), shell programming (sh/bash), commands find, grep, cat, cut, ls, awk.	
Recommended literature: Course notes provided on the course website, freely available electronic materials	
Languages necessary to complete the course: Slovak, English	
Notes:	

Past grade distribution					
Total number of evaluated students: 148					
A	B	C	D	E	FX
13,51	33,78	32,43	10,81	6,08	3,38
Lecturers: RNDr. Jaroslav Janáček, PhD.					
Last change: 09.02.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAG/1-DAV-211/20		Course title: Visual Data in Cultural Heritage			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Andrej Ferko, PhD.					
Last change: 18.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KDMFI/1-AIN-189/15		Course title: Web Applications (1)			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KZVI/1-AIN-615/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1784					
A	B	C	D	E	FX
36,32	11,83	12,72	12,39	13,4	13,34
Lecturers: PaedDr. Roman Hrušecký, PhD., RNDr. Marek Nagy, PhD.					
Last change: 22.09.2017					
Approved by:					