

Course descriptions

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COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KEF/1-MMN-140/00	Course title: Accounting I
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:	
Course requirements: Scale of assessment (preliminary/final): 30/70	
Learning outcomes: The student is able to give complete overview about the subject of accounting, to explain basic accounting terminology, balance sheet theory, the structure of the accounts, accounting evidence, accounting books, principles of evaluation of assets and liabilities, closing process, the structure of financial statements and with the problems of international harmonization of accounting.	
Class syllabus: 1. The importance of accounting as part of a business information system 2. The objectives and functions of accounting 3. General accounting principles 4. Assets and liabilities 5. Balance sheet, its content and role. Impact of economic operations on a balance sheet. 6. Double-entry accounting (bookkeeping) system 7. Accounting documents 8. Books of account 9. Valuation of assets and liabilities in the double entry accounting (bookkeeping) 10. Understanding the cycle of assets by the double entry accounting (bookkeeping) 11. The financial statements and its structure 12. Conceptual framework of IFRS and principles of IFRS conversion from Slovak financial statements to the financial statements according to the IAS / IFRS	
Recommended literature: 1. Saxunová, D.: Účtovníctvo I., cvičebnica A. Wolters Kluwer, Bratislava 2017 2. Zákon č. 431/2002 Z. z. o účtovníctve v znení neskorších predpisov 3. Zákon č. 595/2003 Z. z. o dani z príjmu v znení neskorších predpisov	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution					
Total number of evaluated students: 545					
A	B	C	D	E	FX
33,58	18,53	23,49	13,76	8,81	1,83
Lecturers: Ing. Viera Ölvecká, PhD.					
Last change: 06.02.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KEF/1-MMN-170/00	Course title: Accounting II
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: Scale of assessment (preliminary/final): 40/60	
Learning outcomes: The student is able to illustrate accounting procedures for double-entry accounting for entrepreneurs, to learn fundamental reciprocity while accounting on synthetic accounts of double-entry bookkeeping of businessmen using general chart of accounts and accounting procedures issued by Ministry of Finance of SR.	
Class syllabus: 1. The accounting methodology 2. Accounting of long-term/non-current assets, evaluation of assets 3. Accounting of long-term/non-current assets, depreciation, disposal of an assets 4. Accounting of inventories 5. Accounting of short-term assets and financial assets 6. Accounting of short-term liabilities 7. Accrued expenses and revenues 8. Accounting of equity and long-term liabilities 9. Accounting of costs 10. Accounting of revenues 11. Financial Statements 12. Solving of comprehensive exercise	
Recommended literature: 1. Kajanová, J.: Podvojné účtovníctvo. Vybrané účtovné prípady. KARTPRINT, Bratislava 2016 2. Kajanová, J.- Ölvecká, V. - Saxunová, D.: Podvojné účtovníctvo - Zbierka úloh a príkladov. Wolters Kluwer, Bratislava 2016 3. Zákon č. 431/2002 Z. z. o účtovníctve v znení neskorších predpisov 4. Zákon č. 595/2003 Z. z. o dani z príjmov v znení neskorších predpisov	
Languages necessary to complete the course: english	

Notes:					
Past grade distribution					
Total number of evaluated students: 497					
A	B	C	D	E	FX
19,92	18,91	20,32	19,92	17,3	3,62
Lecturers: Ing. Viera Ölvecká, PhD.					
Last change: 06.02.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAG/1-MMN-515/00		Course title: Algebra and Geometry Complementary Classes (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: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 460					
A	B	C	D	E	FX
47,83	20,43	15,22	7,17	6,52	2,83
Lecturers: Mgr. Tomáš Rusin, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAG/1-MMN-525/00		Course title: Algebra and Geometry Complementary Classes (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: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 397					
A	B	C	D	E	FX
53,4	19,65	12,09	6,8	3,53	4,53
Lecturers: Mgr. Tomáš Rusin, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-910/00		Course title: BSc Project (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: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: To start searching in literature following the type of problem solved.					
Recommended literature: Related to given problem					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 397					
A	B	C	D	E	FX
88,41	8,06	2,27	0,5	0,76	0,0
Lecturers:					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-920/00		Course title: BSc Project (2)			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: To use relevant literature to complete solution of chosen problem.					
Recommended literature: Related to given problem					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 392					
A	B	C	D	E	FX
86,48	9,18	2,3	0,51	0,77	0,77
Lecturers:					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KMANM/1-MMN-991/15	Course title: BSc Thesis Defense
Number of credits: 2	
Educational level: I.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by: doc. RNDr. Vladimír Toma, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MAT-510/00		Course title: Biomathematics (1)			
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.KMANM/1-MAT-250/14 - Mathematical Analysis (4) or FMFI.KMANM/1-MMN-250/17 - Mathematical Analysis (4) or FMFI.KMANM/1-BMF-261/15 - Basics of Mathematics (4)					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: Selection dynamics and population genetics: Hardy-Weinberger law for two and more alleles, the selection equation, the mutation selection equation, the selection recombination equation. Models of population ecology: logistic equation, Lotka-Volterra equations for predator-prey systems with and without intraspecific competition.					
Recommended literature: J. Hofbauer, K. Sigmund: The Theory of Evolution and Dynamical systems, Cambridge University Press, Cambridge 1988.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 132					
A	B	C	D	E	FX
51,52	17,42	19,7	8,33	3,03	0,0
Lecturers: prof. RNDr. Jaroslav Jaroš, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MAT-515/00		Course title: Biomathematics (2)			
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: FMFI.KMANM/1-MAT-510/00 - Biomathematics (1)					
Course requirements:					
Learning outcomes:					
Class syllabus: Models of population ecology: the equilibria and their stability, Lotka-Volterra equations for more than two populations. Game dynamics: evolutionary stable strategies, evolution of phenotypes, equations for asymmetric games.					
Recommended literature: J. Hofbauer, K. Sigmund: The Theory of Evolution and Dynamical systems, Cambridge University Press, Cambridge 1988.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 62					
A	B	C	D	E	FX
41,94	16,13	24,19	14,52	1,61	1,61
Lecturers: prof. RNDr. Jaroslav Jaroš, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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.					
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: 78					
A	B	C	D	E	FX
55,13	28,21	11,54	3,85	1,28	0,0
Lecturers: doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-285/00		Course title: Business Graphics (1)			
Educational activities: Type of activities: seminar 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: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Vector graphic editors. Applications graphic software CorelDRAW in advertising.					
Recommended literature: Corel DRAW!5 , GRADA Publishing 1995 CorelDRAW Graphics Suite X3, 2008 Corel Corporation Manuals to individual version http://www.corel.com/					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 58					
A	B	C	D	E	FX
68,97	12,07	6,9	0,0	10,34	1,72
Lecturers: RNDr. Peter Švaňa, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-300/00		Course title: Business Graphics (2)			
Educational activities: Type of activities: seminar 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: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Bitmaps editors Applications graphic software PHOTO-PAINT in advertising.					
Recommended literature: Corel DRAW!5 , GRADA Publishing 1995 CorelDRAW Graphics Suite X3, 2008 Corel Corporation Manuals to individual version http://www.corel.com/					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 38					
A	B	C	D	E	FX
42,11	5,26	18,42	2,63	5,26	26,32
Lecturers: RNDr. Peter Švaňa, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI-FM.KIS/1-MMN-280/00		Course title: Business Law I			
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: 5.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 0/100					
Learning outcomes:					
Class syllabus:					
Recommended literature: Obchodný zákonník č. 513/1991 Zb. v znení poslednej novely z. č. 11/1998 Z. z. Exekučný poriadok č. 223/1995 Z. z. v znení poslednej novely z. č. 353/1997 Z. z. Zákon č. 328/1991 Zb. O konkurze a vyrovnaní v znení poslednej novely z. č. 12/1998 Z. z. Zákon č. 248/1992 Zb. O investičných spoločnostiach a investičných fondoch v znení poslednej novely z. č. 191/1995 Z. z. Zákon č. 455/1991 Zb. O živnostenskom podnikaní v znení poslednej novely z. č. 76/1998 Z. z. Zákon č. 303/1995 Z. z. O rozpočtových pravidlách SR v znení poslednej novely z. č. 358/1997 Z. z. Zákon č. 11/1990 Zb. O štátnom podniku v znení poslednej novely z. č. 317/1996 Z. z. Zákon č. 427/1990 Zb. O prevodoch vlastníctva štátu k niektorým veciam na iné právnické alebo fyzické osoby Zákon č. 92/1991 Zb. O podmienkach prevodu majetku štátu na iné osoby v znení neskorších predpisov					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 429					
A	B	C	D	E	FX
39,63	28,9	16,55	7,69	7,23	0,0
Lecturers: doc. JUDr. PhDr. Tomáš Peráček, PhD.					
Last change: 02.06.2015					

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KIS/1-MMN-335/00	Course title: Business Law II
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.	
Prerequisites:	
Course requirements: Scale of assessment (preliminary/final): 50/50	
Learning outcomes:	
Class syllabus:	
Recommended literature: Obchodný zákonník č. 513/1991 Zb. v znení poslednej novely z. č. 11/1998 Z. z. Občiansky zákonník č. 40/1964 Zb. v znení poslednej novely z. č. 211/1997 Z. z. Občiansky súdny poriadok č. 99/1963 Zb. v znení poslednej novely z. č. 211/1997 Z. z. Exekučný poriadok č. 223/1995 Z. z. v znení poslednej novely z. č. 353/1997 Z. z. Zákon č. 328/1991 Zb. O konkurze a vyrovnaní v znení poslednej novely z. č. 12/1998 Z. z. Zákon č. 248/1992 Zb. O investičných spoločnostiach a investičných fondoch v znení poslednej novely z. č. 191/1995 Z. z. Zákon č. 600/1992 Zb. O cenných papieroch v znení poslednej novely z. č. 204/1997 Z. z. Zákon č. 530/1990 Zb. O dlhopisoch v znení poslednej novely z. č. 355/1997 Z. z. Zákon č. 191/1950 O zmenkách a šekoch Zákon č. 455/1991 Zb. O živnostenskom podnikaní v znení poslednej novely z. č. 76/1998 Z. z. Zákon č. 303/1995 Z. z. O rozpočtových pravidlách SR v znení poslednej novely z. č. 358/1997 Z. z. Zákon č. 11/1990 Zb. O štátnom podniku v znení poslednej novely z. č. 317/1996 Z. z. Zákon č. 427/1990 Zb. O prevodoch vlastníctva štátu k niektorým veciam na iné právnické alebo fyzické osoby Zák. č. 92/1991 Zb. O podmienkach prevodu majetku štátu na iné osoby v znení neskorších predpisov	
Languages necessary to complete the course:	
Notes:	

Past grade distribution					
Total number of evaluated students: 330					
A	B	C	D	E	FX
40,0	33,03	14,85	8,48	3,64	0,0
Lecturers: JUDr. Juraj Vališ, doc. JUDr. PhDr. Tomáš Peráček, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-556/15		Course title: DEA Models			
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: FMFI.KMANM/1-EFM-220/00 - Linear Programming or FMFI.KMANM/1-MMN-255/00 - Linear Programming					
Course requirements:					
Learning outcomes: Upon completion of the course students will understand the fundamentals of DEA models and will be able to use them for evaluating the effectiveness of units within a given group.					
Class syllabus: Introduction to DEA modelling, different approaches to DEA modeling, efficiency and effectiveness, CCR model, BCC model, range efficiency, additive model, basic model properties, model invariance, monotonous efficiency, input / output additions, returns to scale, superefektivty, rules for correct application of DEA models, SBM model, AR model.					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 128					
A	B	C	D	E	FX
39,84	31,25	15,63	10,94	0,0	2,34
Lecturers: doc. RNDr. Margaréta Halická, CSc.					
Last change: 09.10.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM+KAMŠ/1-MMN-310/15		Course title: Databases and Information Systems			
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: 5.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAMŠ/1-MMN-310/00					
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
28,95	5,26	5,26	18,42	42,11	0,0
Lecturers: doc. RNDr. Vladimír Toma, PhD., RNDr. Igor Odrobina, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI+KAG/1-MMN-220/15		Course title: Discrete Mathematics			
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: 3.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAGDM/1-MMN-220/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 10					
A	B	C	D	E	FX
90,0	0,0	10,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Eduard Toman, CSc., RNDr. Jana Tomanová, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-120/17		Course title: Economics (1)			
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: 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: 141					
A	B	C	D	E	FX
5,67	14,89	17,02	26,24	19,15	17,02
Lecturers: doc. RNDr. Ján Bod'a, CSc.					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-EFM-140/17		Course title: Economics (2)			
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: 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: 97					
A	B	C	D	E	FX
9,28	26,8	25,77	22,68	13,4	2,06
Lecturers: doc. RNDr. Ján Boďa, CSc.					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 144					
A	B	C	D	E	FX
59,72	18,06	9,03	2,08	1,39	9,72
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 78					
A	B	C	D	E	FX
64,1	20,51	6,41	1,28	0,0	7,69
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 4833					
A	B	C	D	E	FX
29,82	23,82	19,04	12,97	7,99	6,37
Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Mgr. Ľubomíra Kožehubová, Mgr. Marián Mancovič, Mgr. Eva Foltánová					

Last change: 22.02.2019
Approved by: doc. RNDr. Vladimír Toma, PhD.

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: 1429					
A	B	C	D	E	FX
19,17	21,55	25,68	16,66	10,99	5,95
Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Mgr. Ľubomíra Kožehubová, Mgr. Marián Mancovič, Mgr. Eva Foltánová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 1183					
A	B	C	D	E	FX
16,91	19,19	22,74	17,58	18,34	5,24
Lecturers: PhDr. Elena Klátiková, PhDr. Alena Zemanová, Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, Mgr. Ľubomíra Kožehubová, Mgr. Marián Mancovič, Mgr. Eva Foltánová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 2426					
A	B	C	D	E	FX
28,11	29,55	21,23	10,8	5,36	4,95
Lecturers: Mgr. Ing. Jana Kočvarová, Mgr. Alexandra Maďarová, PhDr. Alena Zemanová, PhDr. Elena Klátiková, Mgr. Ľubomíra Kožehubová, Mgr. Marián Mancovič, Mgr. Eva Foltánová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAMŠ/1-EFM-570/00		Course title: Experimental Economics			
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: 1. Competitive Markets (Supply and Demand. Shifting Supply.) 2. Market Intervention and Public Policy (A Sales Tax. Prohibition. A Minimum Wage.) 3. Imperfect Markets (Externalities. Monopolies and Cartels.) 4. Firms a technology (Entry and Exit. Network Externalities. Measuring Productivity. Comparative Advantage.) 5. Information, Auctions, Bargaining (Adverse Selection. Auctions. Bargaining.)					
Recommended literature: Theodore Bergstrom - John H. Miller: Experiments with Economic Principles: Microeconomics, McGraw-Hill, 2000.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 96					
A	B	C	D	E	FX
97,92	0,0	2,08	0,0	0,0	0,0
Lecturers: doc. RNDr. Ján Pekár, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-MMN-331/10		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.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 50/50					
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: 313					
A	B	C	D	E	FX
29,39	23,64	26,2	10,22	10,22	0,32
Lecturers: doc. Mgr. Igor Melicherčík, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-216/14		Course title: Financial Planning - Personal and Family Finance			
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: 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: 29					
A	B	C	D	E	FX
86,21	3,45	3,45	3,45	3,45	0,0
Lecturers: Mgr. Andrea Straková					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 387					
A	B	C	D	E	FX
41,09	21,96	21,19	9,82	2,07	3,88
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 247					
A	B	C	D	E	FX
36,03	26,72	21,05	10,93	2,83	2,43
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 97					
A	B	C	D	E	FX
36,08	28,87	22,68	7,22	1,03	4,12
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 68					
A	B	C	D	E	FX
36,76	35,29	19,12	2,94	1,47	4,41
Lecturers: Mgr. Ľubomíra Kožehubová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-MMN-375/00		Course title: Game 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: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2) and FMFI.KAMŠ/1-MAT-282/00 - Probability and Statistics (2)					
Course requirements: Continuous assessment: homework, experiment, continuous and final written test Approximate rating scale: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 100/0					
Learning outcomes: The student will be able to correctly analyse strategic situations while being able to make the right decisions.					
Class syllabus: Static games with full information. Dominance. Nash equilibrium. Illustration of Nash Equilibrium (Cournot's and Bertrand's Oligopoly Model, Electoral Games, Eradication War, Auctions). Nash equilibrium in mixed actions. Extensive games with perfect information. Associated game, Nash's equilibrium. Extensive games with imperfect information.					
Recommended literature: Dixit-Skeath: Games of Strategy Gibbons: Game Theory for Applied Economists					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 337					
A	B	C	D	E	FX
12,76	26,71	30,27	13,95	13,95	2,37
Lecturers: doc. RNDr. Ján Pekár, PhD.					
Last change: 15.05.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 666					
A	B	C	D	E	FX
32,28	29,13	21,17	9,91	2,85	4,65
Lecturers: Mgr. Alexandra Maďarová, Mgr. Marián Mancovič					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 423					
A	B	C	D	E	FX
30,5	21,99	22,93	14,66	3,78	6,15
Lecturers: Mgr. Alexandra Maďarová, Mgr. Marián Mancovič					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 150					
A	B	C	D	E	FX
38,0	28,0	22,0	6,67	2,67	2,67
Lecturers: Mgr. Alexandra Maďarová, Mgr. Marián Mancovič					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 78					
A	B	C	D	E	FX
35,9	28,21	14,1	12,82	3,85	5,13
Lecturers: Mgr. Alexandra Maďarová, Mgr. Marián Mancovič					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-370/00		Course title: Insurance Mathematics			
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: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: FMFI.KAMŠ/1-MAT-282/00 - Probability and Statistics (2)					
Course requirements:					
Learning outcomes:					
Class syllabus: Experience tables, biometric values, ground et some further insurance classes: on endowment insurance, mixed insurance, insurance payable at death, insurance a terme fixe. Payment life insurance, temporary et deference. Rent. Insurance classes, monetary incomes, simple premium et current premium, clear, gross tariff et insurance. Policy reserves (clear et gross, Zillmer reserve) Continuous methods insurance mathematics.					
Recommended literature: Cipra T.: Matematické metody demografie a pojištění, SNTL, Praha 1990. Bilíková M., Sekerová V.: Poistná matematika 1, FHI EU, Bratislava 1996. Čejková V., Pelikánová D., Vanko D.: Poistné operácie, ES EU, Bratislava 1993.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 420					
A	B	C	D	E	FX
29,05	20,95	22,14	17,38	9,29	1,19
Lecturers: RNDr. Peter Švaňa, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 33					
A	B	C	D	E	FX
87,88	12,12	0,0	0,0	0,0	0,0
Lecturers: PaedDr. Elena Mendelová, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 451					
A	B	C	D	E	FX
25,72	28,82	22,39	12,2	7,54	3,33
Lecturers: prof. RNDr. Ing. Ľudomír Šlahor, CSc., PhDr. Daniela Majerčáková, PhD., MBA					
Last change: 07.03.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMn/1-MMN-130/00	Course title: Introduction to Management I
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: Essay (max. 10%), presentation of the essay (max. 10%), midterm test (max. 15%), active participation in solving case studies, final test (max. 25%), oral exam (max. 40%). Scale of assessment (preliminary/final): 60/40	
Learning outcomes: After completing the course the student obtains a comprehensive knowledge of selected areas of management theory and become familiar with the basic procedures for identifying and solving problems in management practice. Course content also focuses on developing managerial skills and abilities of listeners. Students through an individual elaboration of an essay, its presentation followed by discussion and case studies enhance the correct use of terminology of management as a science discipline, expanding their knowledge and improving the skills necessary for further study and management practice.	
Class syllabus: 1. Managers and management – management as a process, science, and profession. 2. Management theory development. 3. Organizational culture. 4. Organizational environment. 5. Management in a global environment. 6. Social responsibility and managerial ethics. 7. Managerial decision-making. 8. Foundations of planning. 9. Strategic management. 10. Forecasting.	
Recommended literature: [1] WOJČÁK, E. - RUDY, J. - BAJZÍKOVÁ, Ľ. a kol. Manažment, UK Bratislava, 2017. [2] PIŠKANIN A. – RUDY J. a kol.: Manažment klasické teórie a moderné trendy, UK Bratislava, 2010. [3] SEDLÁK M.: Manažment. Iura Edition, Bratislava 2009.	

- [4] ROBBINS, P. R. - COULTER, M.: Management, Harlow : Pearson education limited, 2018, 14th edition. p 751. ISBN 978-1-292-21583-9
- [5] ROBBINS, P. R. - COULTER, M. with contributions by MARTOCCHIO, J. J., KONG, L. K.: Management, Harlow : Pearson education limited, 2016, 13th edition. p. 717 . ISBN 978-1-292-09020-7
- [6] Journal of Human Resource Management. ISSN 2453 – 7683-[online] www.jhrm.eu

Languages necessary to complete the course:

Slovak and English language

Notes:

Past grade distribution

Total number of evaluated students: 552

A	B	C	D	E	FX
23,37	20,29	19,38	13,59	19,38	3,99

Lecturers: doc. Mgr. Emil Wojčák, PhD., Mgr. Michaela Poláková, PhD.

Last change: 07.05.2019

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMn/1-MMN-131/00	Course title: Introduction to Management II
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: 2.	
Educational level: I.	
Prerequisites:	
Course requirements: Oral exam (max. 100%). Scale of assessment (preliminary/final): 0/100	
Learning outcomes: The result of the course is to provide basic knowledge of management, while students in lectures acquainted with the main approaches and principles of selected areas of management.	
Class syllabus: 1. Basics of organizing. 2. Job design. 3. Human resource management. 4. Individual and group behavior. 5. Motivation of employees. 6. Leadership theories. 7. Communication and interpersonal skills. 8. Controlling as a function of management. 9. Change management. 10. Self management and time management.	
Recommended literature: [1] WOJČÁK, E. - RUDY, J. - BAJZÍKOVÁ, Ľ. a kol. Manažment, UK Bratislava, 2017. [2] PIŠKANIN A. – RUDY J. a kol.: Manažment klasické teórie a moderné trendy, UK Bratislava, 2010. [3] SEDLÁK M.: Manažment. Iura Edition, Bratislava 2009. [4] ROBBINS, P. R. - COULTER, M.: Management, Harlow : Pearson education limited, 2018, 14th edition. p 751. ISBN 978-1-292-21583-9 [5] ROBBINS, P. R. - COULTER, M. with contributions by MARTOCCHIO, J. J., KONG, L. K.: Management, Harlow : Pearson education limited, 2016, 13th edition. p. 717 . ISBN 978-1-292-09020-7 [6] Journal of Human Resource Management. ISSN 2453 – 7683-[online] www.jhrm.eu	

Languages necessary to complete the course: English language					
Notes:					
Past grade distribution Total number of evaluated students: 372					
A	B	C	D	E	FX
31,45	24,46	13,71	11,56	14,78	4,03
Lecturers: doc. Mgr. Emil Wojčák, PhD.					
Last change: 07.05.2019					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMn/1-MMN-231/10	Course title: Introduction to Management Seminar
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: Active participation in solving case studies, Midterm test (max. 40%), , final test (max. 60%). To obtain a rating A, at least 91 points must be obtained, to obtain rating B at least 81 points must be obtained, for rating C at least 73 points, for rating D at least 66 points and for rating E at least 60 points. Scale of assessment (preliminary/final): 100/0 Scale of assessment (preliminary/final): 100/0	
Learning outcomes: After completing the course the student obtains a comprehensive knowledge of selected areas of management theory and become familiar with the basic procedures for identifying and solving problems in management practice. Course content also focuses on developing managerial skills and abilities of listeners. Students through an individual elaboration of an essay, its presentation followed by discussion and case studies enhance the correct use of terminology of management as a science discipline, expanding their knowledge and improving the skills necessary for further study and management practice.	
Class syllabus: 1. Basics of organizing. 2. Job design. 3. Human resource management. 4. Individual and group behavior. 5. Motivation of employees. 6. Leadership theories. 7. Communication and interpersonal skills. 8. Controlling as a function of management. 9. Change management. 10. Self management and time management.	
Recommended literature: [1] ROBBINS, P. R. – COULTER, M. 2016. Management. 13th Edition. Harlow : Pearson Education Limited, 2016.	

[2] ROBBINS, P. R. – COULTER, M. 2005. Management. 11th Edition. New Jersey : Pearson Prentice Hall, 2005.

[3] RUDY, J. 1998. Introduction to Management. Selected Readings. Bratislava : Comenius University, 1998.

JOURNALS:

Journal of Human Resource Management, UK Bratislava.

Languages necessary to complete the course:

Slovak and English language

Notes:

Past grade distribution

Total number of evaluated students: 51

A	B	C	D	E	FX
41,18	19,61	11,76	9,8	9,8	7,84

Lecturers: doc. Mgr. Emil Wojčák, PhD.

Last change: 20.02.2019

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMn/1-MMN-240/00	Course title: Introduction to Personnel 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: 3.	
Educational level: I.	
Prerequisites:	
Course requirements: Assignments during the semester: Case study (team assignment) - 15% Midterm test - 15% Final test - 15% In-class activities - 15% Oral exam in the exam period: 40% Scale of assessment (preliminary/final): 60/40	
Learning outcomes: The aim of this course is to familiarize students with the major functions of HR management (e.g. job analysis, recruitment and selection, training and development, career management, compensation, etc.) and their relations to other fields of management as well as to explore the link between business strategy and individual HR functions. Students develop a basic understanding of the implementation of individual HR functions from both employer and employee points of view.	
Class syllabus: The role of HR management in the organization. HR planning and job analysis. Employee recruitment and selection. Performance management and performance appraisal. Employee training, development and career. Employee compensation and motivation. Employee and labor relations. International HRM.	
Recommended literature: Bajžíková, Ľ. et al. 2013. Manažment ľudských zdrojov. Bratislava: Univerzita Komenského v Bratislave. Carbery, R., Cross, C. 2013. Human Resource Management – A Concise Introduction. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan.	

Milkovich T., Boudreau J. 1996. Human Resource Management. Boston: Richard Irwin, 8th edition.
 Koubek J. 2007. Řízení lidských zdrojů. Praha: Management press.
 Journal of Human Resource Management. Bratislava: Comenius University, Faculty of Management. ISSN 2453-7683.
 Selected case studies.

Languages necessary to complete the course:

Slovak, English

Notes:

Past grade distribution

Total number of evaluated students: 449

A	B	C	D	E	FX
36,3	31,63	17,59	8,46	6,01	0,0

Lecturers: prof. Ing. Ľubica Bajžíková, PhD., Mgr. Zuzana Kirchmayer, PhD., Mgr. Jana Fratričová, PhD., Mgr. Juliet Horváthová Suleimanová, PhD.

Last change: 12.02.2018

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI-FM.KIS/1-MMN-355/18		Course title: Labor Law			
Educational activities: Type of activities: seminar 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: 1					
A	B	C	D	E	FX
0,0	100,0	0,0	0,0	0,0	0,0
Lecturers: doc. JUDr. Ján Matlák, CSc.					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 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: 58					
A	B	C	D	E	FX
27,59	36,21	22,41	12,07	1,72	0,0
Lecturers: doc. PhDr. Ján Rybár, PhD.					
Last change: 22.09.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAG/1-MMN-120/00		Course title: Linear Algebra and Geometry (1)			
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: 1.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 30/70					
Learning outcomes:					
Class syllabus: The basic notions (integers, sets, mappings, binar relations, groups, rings, fields). Vector spaces, subspaces. Linear dependence, basis and dimension. Linear sums of the subspaces. Linear mappings, matrices. Regular mappings, inverse matrices. Systems of linear equations, determinants. Euclidean vector spaces.					
Recommended literature: J. Korbaš: Lineárna algebra a geometria I. Univerzita Komenského, Bratislava 2003. T. Katriňák, M. Gavalec, E. Gedeonová, J. Smítal: Algebra a teoretická aritmetika 1. Univerzita Komenského, Bratislava 1999. G. Birkhoff, S. MacLane: A Survey of Modern Algebra (Macmillan, 4th Edition 1977), translation into Slovak: Prehľad modernej algebry. Alfa, Bratislava 1979.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 535					
A	B	C	D	E	FX
21,31	19,63	21,31	17,94	17,76	2,06
Lecturers: doc. RNDr. Róbert Jajcay, DrSc., Mgr. Martina Babinská, PhD.					
Last change: 15.01.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAG/1-MMN-160/00		Course title: Linear Algebra and Geometry (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: 2.					
Educational level: I.					
Prerequisites: FMFI.KAG/1-MMN-120/00 - Linear Algebra and Geometry (1)					
Course requirements: Scale of assessment (preliminary/final): 30/70					
Learning outcomes:					
Class syllabus: The groups of the transforms of the vector space. Similar matrices (eigenvalues, eigenvectors , characteristic and minimal polynomial). Bilinear and quadratic forms (spectral decomposition of the symetric matrix). The groups (subgropus, cyclic groups). The finite groups (Lagrange theorem). The homomorphism of the groups (quotient group). The ring, the integral domain, the field. The polynomial ring (selected facts about polynomials).					
Recommended literature: J. Korbaš: Lineárna algebra a geometria I. Univerzita Komenského, Bratislava 2003. T. Katriňák, M. Gavalec, E. Gedeonová, J. Smítal: Algebra a teoretická aritmetika 1. Univerzita Komenského, Bratislava 1999. G. Birkhoff, S. MacLane: A Survey of Modern Algebra (Macmillan, 4th Edition 1977), translation into Slovak: Prehľad modernej algebry. Alfa, Bratislava 1979.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 502					
A	B	C	D	E	FX
27,49	22,71	20,72	13,35	13,94	1,79
Lecturers: doc. RNDr. Róbert Jajcay, DrSc., Mgr. Martina Babinská, PhD.					
Last change: 15.01.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAG/1-MMN-560/00		Course title: Linear Algebra and Geometry (3)			
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: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Euclidian (point-vector) space En. Linear varieties in En. The system of coordinates (the equations of a variety). The common position of two varieties, metric connections (perpendicularity, distance and angle of two varieties). Bilinear and quadratic forms (Lagrange method, canonical form). Sylvester's laws. The application to theory of the quadric in euclidian plane.					
Recommended literature: J. Korbaš: Lineárna algebra a geometria I. Univerzita Komenského, Bratislava 2003. T. Katriňák, M. Gavalec, E. Gedeonová, J. Smítal: Algebra a teoretická aritmetika 1. Univerzita Komenského, Bratislava 1999. G. Birkhoff, S. MacLane: A Survey of Modern Algebra (Macmillan, 4th Edition 1977), translation into Slovak: Prehľad modernej algebry. Alfa, Bratislava 1979.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 271					
A	B	C	D	E	FX
39,11	11,07	13,65	15,5	20,3	0,37
Lecturers: RNDr. Jana Chalmovianská, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-255/00		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: 4.					
Educational level: I., II.					
Prerequisites: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2) or FMFI.KAG/1-INF-156/10 - Algebra (2)					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: Introduction to linear programming. Techniques of solving LP problems by primal simplex metod. Duality in LP and its consequences. Economic interpretation of the dual problem. Modelling of operations research problems as the linearn programming problems.					
Recommended literature: W. L. Winston: Operations Research: Aplications and Algorithms, Wadsworth Pub. Co., 1997. V. Toma: Teória a algoritmy lineárneho programovania (Theory and algorithms of linear programming), UK Bratislava, 1983. J. Plesník: Operačná analýza (Operations analysis), UK Bratislava, 1989.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 433					
A	B	C	D	E	FX
13,63	18,01	21,71	19,86	22,17	4,62
Lecturers: doc. RNDr. Vladimír Toma, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KMANM/1-MMN-972/15	Course title: Management and Finance
Number of credits: 2	
Educational level: I.	
State exam syllabus:	
Last change: 05.11.2015	
Approved by: doc. RNDr. Vladimír Toma, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMk/1-MMN-340/00	Course title: Marketing
Educational activities: Type of activities: lecture / seminar 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: 40 % interim evaluation: - active attendance on seminars (in case of unjustified absence or unpreparedness on seminar loss of 10%) - interim evaluation (2 written intermediate tests 10%) - semester project – application of theoretical knowledge on selected organization – 30% 60 % final evaluation: - exam – written test (corrective dates – oral exam) The overall student rating consists of the sum of the percentages for active attendance on seminars the semester project, and of the percentage obtained from the exam. Exam is written. System of interim evaluation is set on the beginning of semester. Scale of assessment (preliminary/final): 40/60	
Learning outcomes: The aim of the course is to acquire the basic knowledge from the various areas of marketing theory. The subject emphasizes the importance and benefits of basic marketing postulates in terms of the interconnection of the organization and its customers. Emphasis is placed on acquiring skills in marketing decision-making and performing individual marketing activities of the organization, especially in strategic and marketing planning, market segmentation and market positioning, marketing research, analysis of marketing environment and consumer and organizational purchasing behavior in designing of marketing mix and in exploitation of international marketing. The subject also emphasizes the impact of the online environment and the selected specifics of digital marketing. In addition to gaining theoretical knowledge, the subject is also aimed at stimulating the students' ability to apply the marketing concept in economic practice.	
Class syllabus: 1. Position and importance of marketing in company development. 2. The nature of the marketing concept. 3. Strategic planning and marketing management. 4. Importance of marketing planning. 5. Marketing environment.	

6. Marketing information system and marketing research.
7. Shopping behavior of consumers in organizations.
8. Market segmentation, target group selection and creation of market position.
9. Marketing mix and advanced marketing mix.
10. Product as a marketing mix tool.
11. Pricing and pricing strategy of the company.
12. Distribution channels and physical distribution.
13. Marketing communication and marketing communication mix.
14. International marketing.

Recommended literature:

- [1] BARTÁKOVÁ, G. – CIBÁKOVÁ, V. – ŠTARCHOŇ, P.: Základy marketingu. 2. rozšírené vydanie. Bratislava: 2007. ISBN 978-80-969834-4-5
- [2] KOTLER, P. – ARMSTRONG, G.: Marketing. Praha: Grada 2007. ISBN 80-247-0513-3
- [3] KOTLER, P. – WONG, V. – SAUNDERS, J. – ARMSTRONG, G.: Moderní marketing. Praha: Grada Publishing 2007. ISBN 8024715457
- [4] BAINES, P. – FILL, C. – PAGE, K.: Marketing. Oxford: Oxford University Press 2011. ISBN 978-0-19-957961-7
- [5] BLYTHE, J.: Principles and Practice of Marketing. 2nd Editon. Hampshire: Cengage Learning EMEA 2009. ISBN 978-1-4080-114-78
- [6] ARMSTRONG, G. – KOTLER, P.: Marketing: An Introduction. 8th Editon. Upper Saddle River: Pearson Education, Inc. 2007. ISBN 0-13-186591-9 – vybrané kapitoly.
- [7] BRASSINGTON, F. – PETTITT, S.: Principles of Marketing. Harlow: Prentice Hall 2006. ISBN 0-273-69559-2
- [8] Marketing Science and Inspirations, Marketing&Media.

With regard to new and available resources, supplementary literature will be updated on a continuous basis.

Languages necessary to complete the course:

Slovak, English

Notes:

Past grade distribution

Total number of evaluated students: 438

A	B	C	D	E	FX
29,91	28,77	20,55	11,87	8,45	0,46

Lecturers: prof. Mgr. Peter Štarchoň, PhD.

Last change: 08.03.2018

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KMk/1-MMN-340/00	Course title: Marketing
Educational activities: Type of activities: lecture / seminar 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: 40 % interim evaluation: - active attendance on seminars (in case of unjustified absence or unpreparedness on seminar loss of 10%) - interim evaluation (2 written intermediate tests 10%) - semester project – application of theoretical knowledge on selected organization – 30% 60 % final evaluation: - exam – written test (corrective dates – oral exam) The overall student rating consists of the sum of the percentages for active attendance on seminars the semester project, and of the percentage obtained from the exam. Exam is written. System of interim evaluation is set on the beginning of semester. Scale of assessment (preliminary/final): 40/60	
Learning outcomes: The aim of the course is to acquire the basic knowledge from the various areas of marketing theory. The subject emphasizes the importance and benefits of basic marketing postulates in terms of the interconnection of the organization and its customers. Emphasis is placed on acquiring skills in marketing decision-making and performing individual marketing activities of the organization, especially in strategic and marketing planning, market segmentation and market positioning, marketing research, analysis of marketing environment and consumer and organizational purchasing behavior in designing of marketing mix and in exploitation of international marketing. The subject also emphasizes the impact of the online environment and the selected specifics of digital marketing. In addition to gaining theoretical knowledge, the subject is also aimed at stimulating the students' ability to apply the marketing concept in economic practice.	
Class syllabus: 1. Position and importance of marketing in company development. 2. The nature of the marketing concept. 3. Strategic planning and marketing management. 4. Importance of marketing planning. 5. Marketing environment.	

6. Marketing information system and marketing research.
7. Shopping behavior of consumers in organizations.
8. Market segmentation, target group selection and creation of market position.
9. Marketing mix and advanced marketing mix.
10. Product as a marketing mix tool.
11. Pricing and pricing strategy of the company.
12. Distribution channels and physical distribution.
13. Marketing communication and marketing communication mix.
14. International marketing.

Recommended literature:

- [1] BARTÁKOVÁ, G. – CIBÁKOVÁ, V. – ŠTARCHOŇ, P.: Základy marketingu. 2. rozšírené vydanie. Bratislava: 2007. ISBN 978-80-969834-4-5
- [2] KOTLER, P. – ARMSTRONG, G.: Marketing. Praha: Grada 2007. ISBN 80-247-0513-3
- [3] KOTLER, P. – WONG, V. – SAUNDERS, J. – ARMSTRONG, G.: Moderní marketing. Praha: Grada Publishing 2007. ISBN 8024715457
- [4] BAINES, P. – FILL, C. – PAGE, K.: Marketing. Oxford: Oxford University Press 2011. ISBN 978-0-19-957961-7
- [5] BLYTHE, J.: Principles and Practice of Marketing. 2nd Editon. Hampshire: Cengage Learning EMEA 2009. ISBN 978-1-4080-114-78
- [6] ARMSTRONG, G. – KOTLER, P.: Marketing: An Introduction. 8th Editon. Upper Saddle River: Pearson Education, Inc. 2007. ISBN 0-13-186591-9 – vybrané kapitoly.
- [7] BRASSINGTON, F. – PETTITT, S.: Principles of Marketing. Harlow: Prentice Hall 2006. ISBN 0-273-69559-2
- [8] Marketing Science and Inspirations, Marketing&Media.

With regard to new and available resources, supplementary literature will be updated on a continuous basis.

Languages necessary to complete the course:

Slovak, English

Notes:

Past grade distribution

Total number of evaluated students: 438

A	B	C	D	E	FX
29,91	28,77	20,55	11,87	8,45	0,46

Lecturers: prof. Mgr. Peter Štarchoň, PhD., Mgr. Barbora Suchá

Last change: 08.03.2018

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-111/15		Course title: Mathematical Analysis (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:					
Antirequisites: FMFI.KMANM/1-MMN-111/10					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 136					
A	B	C	D	E	FX
4,41	16,91	21,32	35,29	21,32	0,74
Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., PaedDr. Peter Vankúš, PhD., Mgr. Michaela Vargová, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-150/15		Course title: Mathematical Analysis (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.KMANM/1-MMN-111/15 - Mathematical Analysis (1)					
Antirequisites: FMFI.KMANM/1-MMN-150/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 97					
A	B	C	D	E	FX
13,4	11,34	21,65	34,02	18,56	1,03
Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., PaedDr. Peter Vankúš, PhD., Mgr. Michaela Vargová, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-210/15		Course title: Mathematical Analysis (3)			
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: FMFI.KMANM/1-MMN-150/15 - Mathematical Analysis (2)					
Antirequisites: FMFI.KMANM/1-MMN-210/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 140					
A	B	C	D	E	FX
6,43	10,71	17,86	28,57	36,43	0,0
Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., RNDr. František Jaroš, PhD., Mgr. Július Pačuta, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-250/17		Course title: Mathematical Analysis (4)			
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: 4.					
Educational level: I.					
Prerequisites: FMFI.KMANM/1-MMN-210/15 - Mathematical Analysis (3)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 466					
A	B	C	D	E	FX
6,22	7,51	13,52	27,04	33,69	12,02
Lecturers: RNDr. Michal Demetrian, PhD., doc. RNDr. Zbyněk Kubáček, CSc., RNDr. František Jaroš, PhD., Mgr. Katarína Boďová, PhD.					
Last change: 11.01.2019					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-510/00		Course title: Mathematical Analysis Complementary Classes (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: Scale of assessment (preliminary/final): 100/0					
Learning outcomes: Mathematical analysis.					
Class syllabus: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 509					
A	B	C	D	E	FX
57,96	14,93	10,81	8,25	6,29	1,77
Lecturers: RNDr. František Jaroš, PhD., PaedDr. Peter Vankúš, PhD., Mgr. Michaela Vargová, PhD.					
Last change: 24.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-520/00		Course title: Mathematical Analysis Complementary Classes (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: Scale of assessment (preliminary/final): 100/0					
Learning outcomes: Mathematical analysis.					
Class syllabus: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 459					
A	B	C	D	E	FX
61,44	16,56	9,59	4,58	6,54	1,31
Lecturers: RNDr. František Jaroš, PhD., Mgr. Michaela Vargová, PhD., PaedDr. Peter Vankúš, PhD.					
Last change: 24.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-565/00		Course title: Mathematical Analysis Complementary Classes (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: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 409					
A	B	C	D	E	FX
41,56	22,74	16,87	11,74	5,38	1,71
Lecturers: RNDr. František Jaroš, PhD.					
Last change: 28.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KMANM/1-MMN-570/00		Course title: Mathematical Analysis Complementary Classes (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: 100-91% A; 90-81% B; 80-71% C; 70-61% D; 60-51% E, 50-0% FX Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Revision of all basic notions seen in the lecture and going through the most typical situations which the students can meet during the study of the subject. Giving sufficient number of practical exercises for homework and to discuss their solutions when necessary.					
Recommended literature: The current textbooks recommended by the course teacher.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 365					
A	B	C	D	E	FX
52,88	17,26	11,51	9,59	4,93	3,84
Lecturers: RNDr. František Jaroš, PhD., Mgr. Katarína Boďová, PhD.					
Last change: 28.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-MMN-365/00		Course title: Mathematical Statistics			
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: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2) and FMFI.KAMŠ/1-MAT-282/00 - Probability and Statistics (2)					
Course requirements: Scale of assessment (preliminary/final): 50/50					
Learning outcomes:					
Class syllabus: Random vectors, their probability distribution and characteristics. Transformation of random vectors. Random sampling, sample mean and dispersion. Random sampling from normal distribution. Point estimate and its properties. Rao - Cramer theorem. The method of maximal likelihood and the moment method. Interval estimate. Statistical hypotheses testing, Neumann - Pearson lemma. Tests of good incident. Basic regression models.					
Recommended literature: J. Anděl: Statistické metody. Matfyzpress, 1988. J. Likš, J. Machek: Matematická statistika, SNTL, Praha 1983.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 403					
A	B	C	D	E	FX
24,57	18,86	22,83	20,6	12,16	0,99
Lecturers: RNDr. Andrej Náther, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KMANM/1- MMN-961/15	Course title: Mathematics and Statistics
Number of credits: 2	
Educational level: I.	
State exam syllabus:	
Last change: 05.11.2015	
Approved by: doc. RNDr. Vladimír Toma, PhD.	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-321/10		Course title: Matrix Calculus			
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: 3.					
Educational level: I.					
Prerequisites: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2)					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Examples of the occurrence of matrices in practical tasks. LU- decomposition of a matrix with its modifications. Matrix norms. Projective matrices. Least square problem. Generalised inverse of a matrix. QR- decomposition of a matrix (Gramm-Schmidt, Householder).Singular value decomposition. Spectral properties of symmetric matrix and their applications to the computation of their eigenvalues. Gershgorin's theorem. Hessenberg form of a matrix and eigenvalues.The power method. Practical illustrations.					
Recommended literature: Strang,G. : Linear Algebra and its Applications, Acad.Press., New York - San Francisco - London, 1976. Horn,R.A. - Johnson,Ch.R. : Matrix Analysis, Can.Univ.Press., London - New York - Toronto, 1986. Householder,A.S. : The Theory of Matrices in Numerical Analysis, New York - Toronto - London, 1964. Fiedler,M. : Speciální matice v numerické matematice, SNTL, Praha, 1981. Golub, G.H. - van Loan, C.F. : Matrix Computations, The John Hopkins University Press, Baltimore and London, 1996					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 249					
A	B	C	D	E	FX
7,23	21,29	28,51	26,51	14,86	1,61

Lecturers: Mgr. Martin Niepel, PhD.
Last change: 02.06.2015
Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KEF/1-MMN-345/00	Course title: Money and Banking
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: Scale of assessment (preliminary/final): 40/60	
Learning outcomes:	
Class syllabus: The role of money in economy, interest rates and assets, financial institutions operations and exchange rate theory and policy. Functioning of money as the exchange and counting medium. Investments in many market. Conditions for maintaining the monetary equilibrium and inflation and the factors on which it depends. Money managing and monetary policy, supply of money and the stock of money and monetary basis and relationships to externe equilibrium. Banking system in Slovakia - the central bank – its relationship with comerce banks including international practice.	
Recommended literature: Frederik S. Mishkin: The Economics of Money, Banking and Financial Markets. (second edition), Scott Foresman and Company, Glenview - Illinois - Boston - London 1989. Irena Hlavatá: Menová teória a politika, Ekonóm, Bratislava 1996. Irena Hlavatá: Menová analýza a prognóza, Ekonóm, Bratislava 1998. Jezef Theis: Legislatíva sloveského bankovníctva, Vyd. Paris, a.s., Bratislava 1995. Richard A. Musgrave - Peggy B. Musgrave: Public Finance in Theory and Practice (International students edition), McGraw-Hill Book Company (fifth edion), New York - St. Luis - San Francisco - Sydney - Tokyo - Toronto 1998. - správy NBS o menovom vývoji (Výročné správy a mesačné Monetary survey). - vestníky NBS ako aj dostupné Výročné správy vybraných bánk SR.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution					
Total number of evaluated students: 407					
A	B	C	D	E	FX
13,76	21,13	27,03	21,13	16,71	0,25
Lecturers: Mgr. Lucia Paškrťová, PhD.					
Last change: 08.03.2018					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-316/15		Course title: Nonlinear and Stochastic Optimization (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: 4					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2) and FMFI.KMANM/1-MMN-255/00 - Linear Programming					
Antirequisites: FMFI.KMANM/1-MMN-316/12					
Course requirements: Evaluation during the semester: written test - solving optimization problems Exam: Written exam Scale of assessment (preliminary/final): 50/50					
Learning outcomes: To learn basics of convex analysis.					
Class syllabus: Examples of nonlinear optimization problems. Convex sets, Carathéodory's theorem. Projection of a point on a set. Separation of convex sets, Farkas' Lemma. Convex functions, differentiable convex functions, Jensen's inequality. Subgradient and subdifferential of convex functions.					
Recommended literature: Nonlinear programming / Dimitri P. Bertsekas. Belmont : Athena Scientific, 1999 Convex optimization / Stephen Boyd, Lieven Vandenberghe. Cambridge : Cambridge University Press, 2004					
Languages necessary to complete the course: english					
Notes:					
Past grade distribution Total number of evaluated students: 78					
A	B	C	D	E	FX
32,05	19,23	11,54	17,95	19,23	0,0
Lecturers: doc. RNDr. Ivan Kupka, CSc.					
Last change: 24.10.2016					

Approved by: doc. RNDr. Vladimír Toma, PhD.

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-361/15		Course title: Nonlinear and Stochastic Optimization (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: 4					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2)					
Antirequisites: FMFI.KMANM/1-MMN-361/12					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 82					
A	B	C	D	E	FX
45,12	15,85	13,41	15,85	8,54	1,22
Lecturers: doc. RNDr. Ivan Kupka, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-230/00		Course title: Numerical Methods (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: FMFI.KMANM/1-MMN-150/15 - Mathematical Analysis (2) and FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2)					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes:					
Class syllabus: Scientific computing, number representation and errors, stability of the algorithms, difference equations, locating roots of nonlinear equations and system of nonlinear equations, polynomial interpolation, approximation of the function by spline functions, least square method.					
Recommended literature: Babušíková - Slodička - Weisz: Numerické metody (vysokoškolské skriptá UK Bratislava, 2000. Ralston: A First Course in Numerical Analysis, McGraw-Hill book company, New York, 1965. Přikryl: Numerické metody matematické analýzy, SNTL, Praha 1985. Golub, Ortega: Scientific Computing and Differential Equations - An Introduction to Numerical Methods, Academic Press, San Diego, 1981. Cheney, Kincaid: Numerical mathematics and computing, Brooks/Cole Publishing Company, California, 1985.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 447					
A	B	C	D	E	FX
12,98	27,29	26,85	16,33	14,54	2,01
Lecturers: Dr. Hana Mizerová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-265/00		Course title: Numerical Methods (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: 5					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: FMFI.KMANM/1-MMN-150/15 - Mathematical Analysis (2) and FMFI.KAG/1-MMN-160/00 - Linear Algebra and Geometry (2)					
Course requirements: Scale of assessment (preliminary/final): 30/70					
Learning outcomes:					
Class syllabus: Orthogonal systems and Chebyshev polynomials, direct and iterative methods for systems of linear equations, eigenvalue problem, numerical integration, numerical derivations, Richardson extrapolation					
Recommended literature: Babušíková - Slodička - Weisz: Numerické metody (vysokoškolské skriptá UK Bratislava, 2000. Ralston: A First Course in Numerical Analysis, McGraw-Hill book company, New York, 1965. Příkryl: Numerické metody matematické analýzy, SNTL, Praha 1985. Míka: Numerické metody Algebry, SNTL, Praha 1985. Golub, Ortega: Scientific Computing and Differential Equations - An Introduction to Numerical Methods, Academic Press, San Diego, 1981.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 434					
A	B	C	D	E	FX
12,67	24,42	24,65	23,04	14,75	0,46
Lecturers: Dr. Hana Mizerová					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KI/1-MAT-230/15		Course title: Operation Systems and Computer Networks			
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: 2					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KI/1-MAT-230/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 44					
A	B	C	D	E	FX
56,82	22,73	11,36	4,55	0,0	4,55
Lecturers: RNDr. Jaroslav Janáček, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI-FM.KSP/1-MMN-385/00	Course title: Operations Management
Educational activities: Type of activities: lecture / seminar 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.	
Prerequisites:	
Recommended prerequisites: Basic management course I, II	
Course requirements: Evaluation during semester: 40 % Evaluation in the exam period: 60 %	
Learning outcomes: The goal of the Operations management course is to obtain the basic knowledge about the effective management of processes regarding transformation of the inputs into outputs, and corresponding operations within these processes, and the value creation and addition to the inputs in producing the goods or providing services. The effective management of transformation processes and operations and value creation will be explained based on the principles and applied tools of lean management and lean logistics concepts. Both manufacturing and service companies are a subject of the research.	
Class syllabus: 1. Characteristics of Operations Management and Effective Production System 2. Characteristics of Lean Management 3. Process Management in Capacity Shortage 4. Process Management in Capacity Excess 5. Process Improvement through Target Condition 6. Tolls for Process Improvement and Problem Solving 7. Inventory Management and Pull System 8. Characteristics of the Design for Operational Excellence 9. Creating the Culture of Continuous Improvement and Engaged Workforce	
Recommended literature: 1. HILL, A. – HILL, T.: Operations management. Third Edition. Palgrave Macmillan. USA. 778 p. 2012. ISBN 978-0-230-36290-1. 2. TAYLOR, David – BRUNT, David: Manufacturing Operations and Supply Chain Management. 2001. ISBN 1-86152-604-0.	

3. CHASE, R., B. – JACOBS, F., R. – AQUILANO, N., J.: Operations Management for Competitive Advantage. The McGraw-Hill/Irwin Series. 11th edition, 2006, ISBN 0-07-111552-8. 4. LIKER, J.: The Toyota Way. McGraw-Hill, 2004. 330 p. ISBN 0-07-139231-9.					
Languages necessary to complete the course: Slovak, English					
Notes:					
Past grade distribution Total number of evaluated students: 407					
A	B	C	D	E	FX
50,61	35,14	12,53	1,72	0,0	0,0
Lecturers: doc. Ing. Milan Fekete, PhD., Ing. Jaroslav Hul'vej, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MMN-261/10		Course title: Ordinary Differential Equations			
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: FMFI.KMANM/1-MMN-150/15 - Mathematical Analysis (2)					
Course requirements: tests and examination 100-91% A; 90-81% B; 80-71% C; 70-61% D; 60-51% E, 50-0% FX Scale of assessment (preliminary/final): 45/55					
Learning outcomes:					
Class syllabus: The notion of the differential equation, solution and initial value problem. The creation of mathematical models, methods of integration. Linear n-th order differential equations. The existence and uniqueness of solutions (the Picard's method). Applications in natural and economic sciences.					
Recommended literature: 1. Greguš, M., Švec, M., Šeda, V.: Obyčajné diferenciálne rovnice, Bratislava, Alfa, 1985. 2. D. K. Arrowamith, C. M. Place: Ordinary Diferrential Equations. A Qualitative Approach with Applications, Chapman and Hall, London, New York 1982. 3. E. A. Coddington, N. Levinson: Theory of Ordinary Differential Equations, McGraw-Hill Book Company, Inc., New York, Toronto, London 1955.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 290					
A	B	C	D	E	FX
15,17	8,97	17,59	22,07	31,03	5,17
Lecturers: RNDr. František Jaroš, PhD., prof. RNDr. Milan Medved', DrSc., Dr. Hana Mizerová					
Last change: 28.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-MXX-423/00		Course title: Philosophy of L. Wittgenstein (1)			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: analysis selected sections of Wittgenstein's main writings; influence of Frege's and of Russell's works; interpretation of Wittgenstein's Tractatus; "picture theory" of meaning - fact and Picture of fact; name and meaning of name; sentence and sentence meaning; criterium of sentence meaningfulness - tautology and contradiction, empirical sentences; boundaries of language from the standpoint of theory of meaning; "what we cannot speak about"					
Recommended literature: Wittgenstein, L.: Tractatus logico - philosophicus, Kalligram, Bratislava 2003. Wittgenstein, L.: Modrá a Hnedá kniha, Kalligram, Bratislava 2002. Wittgenstein, L.: Filosofická zkoumání, Filosofia, Praha 1998. Malcolm, N.: Ludwig Wittgenstein v spomienkach. Archa, Bratislava 1993.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 36					
A	B	C	D	E	FX
88,89	2,78	5,56	0,0	2,78	0,0
Lecturers: PhDr. Dezider Kamhal, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-MXX-424/00		Course title: Philosophy of L. Wittgenstein (2)			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: philosophical problem solving by arranging what we have always known (by looking into the workings of our language) - its possibility meanings of "meaning" in ordinary language; expression meaning as its use (usage, way of use); reading and interpretation of The Blue and Brown Books and of Philosophical Investigations					
Recommended literature: Wittgenstein, L.: Tractatus logico - philosophicus, Praha 1993. Wittgenstein, L.: Modrá a Hnedá kniha, Kalligram, Bratislava 2002. Wittgenstein, L.: Filosofická zkoumání, Filosofia, Praha 1998. Malcolm, N.: Ludwig Wittgenstein v spomienkach. Archa, Bratislava 1993.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 25					
A	B	C	D	E	FX
96,0	4,0	0,0	0,0	0,0	0,0
Lecturers: PhDr. Dezider Kamhal, PhD.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 4681					
A	B	C	D	E	FX
97,29	1,77	0,04	0,0	0,02	0,88
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: doc. RNDr. Vladimír Toma, PhD.					

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: 3997					
A	B	C	D	E	FX
97,72	1,88	0,05	0,0	0,0	0,35
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: doc. RNDr. Vladimír Toma, PhD.					

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: 2454					
A	B	C	D	E	FX
99,1	0,53	0,0	0,0	0,0	0,37
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 2210					
A	B	C	D	E	FX
99,64	0,18	0,0	0,05	0,0	0,14
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ladislav Mókus, Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ondrej Podkonický, PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 1654					
A	B	C	D	E	FX
99,4	0,36	0,0	0,0	0,0	0,24
Lecturers: Mgr. Tomáš Kuchár, PhD., Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, 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: doc. RNDr. Vladimír Toma, PhD.					

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: 1447					
A	B	C	D	E	FX
99,52	0,28	0,07	0,0	0,0	0,14
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: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/1-MAT-281/00	Course title: Probability and Statistics (1)
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: 3.	
Educational level: I.	
Prerequisites: (FMFI.KMANM/1-MAT-150/00 - Mathematical Analysis (2) or FMFI.KMANM/1-MMN-150/15 - Mathematical Analysis (2) or FMFI.KAMŠ/1-EFM-130/00 - Mathematical Analysis (2)) and (FMFI.KAG/1-MAT-120/15 - Linear Algebra and Geometry (1) or FMFI.KAG/1-MMN-120/00 - Linear Algebra and Geometry (1) or FMFI.KAG/1-EFM-121/15 - Linear Algebra and Geometry (1))	
Course requirements: Preliminary semester evaluation: a test Examination: written examination Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 70/30	
Learning outcomes: After completing the course the student will be able to use classical probability models, axiomatic approach to the definition of probability. He will master one dimensional discrete and continuous random variables. He will be given an introduction to selected statistical procedures: point and interval estimates of parameters sampling normal distribution.	
Class syllabus: Probability space. Classical probability models. Random variable and distribution function. Elementary discrete and continuous distributions, expectation and variance. Independence and correlation. Normal distribution and the central limit theorem. Random sample, sample mean, sample variance. Sampling normal distribution. Estimation of parameters, maximal likelihood, confidence intervals for the mean of a normal distribution.	
Recommended literature: Janková, K., Pázman, A.: Pravdepodobnosť a štatistika, Vydavateľstvo UK 2011 Harman, R., Honschová, E., Somorčík, J.: Zbierka úloh zo základov teórie pravdepodobnosti, Paci Bratislava 2009 G.R.Grimmett, D. Stirzaker: Probability and Random Processes. Oxford University Press 2001	
Languages necessary to complete the course:	
Notes:	

Past grade distribution					
Total number of evaluated students: 1132					
A	B	C	D	E	FX
16,7	12,19	17,76	22,44	25,71	5,21
Lecturers: doc. RNDr. Katarína Janková, CSc., Mgr. Samuel Rosa, PhD., Mgr. Livia Leššová, Mgr. Jozef Kováč					
Last change: 28.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/1-MAT-282/00	Course title: Probability and Statistics (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.KAMŠ/1-MAT-281/00 - Probability and Statistics (1)	
Course requirements: Preliminary assessment: test Examination: written examination Approximate final assessment: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 30/70	
Learning outcomes: After completing the course the student will master multivariate discrete and continuous distributions. He will be able to calculate distributions of sums, products and ratios of independent random variables. He will know the technique of characteristic functions and will be able to apply it to the multidimensional normal distribution. The knowledge of probability methods will be applied to selected statistical problems of parameter estimation and hypotheses testing.	
Class syllabus: Multiple random variables, their distribution and characteristics. Elementary introduction to Lebesgue integral. Marginal and conditional distributions and densities. Independence, sums of independent random variables. Characteristic functions and their applications. Convergence of sequences of random variables, central limit theorems and weak law of large numbers. Statistical inference: estimation of parameters, maximal likelihood estimates, hypothesis testing. Neyman Pearson lemma. Regression models: least squares and maximal likelihood estimation of parameters. Goodness of fit tests.	
Recommended literature: Janková, K., Pázman, A.: Pravdepodobnosť a štatistika, Vydavateľstvo UK 2011 K. Zvára, J. Štěpán: Pravděpodobnost a matematická statistika, Matfyzpress 1997 Harman, R., Honschová, E., Somorčík, J.: Zbierka úloh zo základov teórie pravdepodobnosti, Paci Bratislava 2009 G.R.Grimmett, D. Stirzaker: Probability and Random Processes. Oxford University Press 2001	
Languages necessary to complete the course:	
Notes:	

Past grade distribution					
Total number of evaluated students: 1095					
A	B	C	D	E	FX
18,72	10,68	15,43	19,45	28,22	7,49
Lecturers: doc. RNDr. Katarína Janková, CSc., Mgr. Jozef Kováč, Mgr. Samuel Rosa, PhD.					
Last change: 28.04.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KDMFI/1-MAT-130/14		Course title: Programming (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:					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes: Students are able to solve problems algorithmically, to process large number of data and to communicate with the user using basic constructions and data types of programming language C #.					
Class syllabus: Graphic commands, Expressions and variables, Loops, Program branching, Solving mathematical problems, Subroutines, Array, Mouse input, Two-dimensional array, Functions					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 432					
A	B	C	D	E	FX
47,45	9,26	6,94	7,64	10,42	18,29
Lecturers: doc. RNDr. Ľubomír Salanci, PhD.					
Last change: 25.10.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KDMFI/1-MAT-170/00		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: 5					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: FMFI.KDMFI/1-MAT-130/14 - Programming (1)					
Course requirements:					
Learning outcomes: Using object-oriented programming in the C # programming language, students are able to solve problems algorithmically, process structured data and interact with the user.					
Class syllabus: Strings, Objects, Timer, Many objects, Turtle graphics, Recursion, Bitmaps, Text files, Keyboard input					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 1571					
A	B	C	D	E	FX
31,7	16,8	12,35	13,49	19,92	5,73
Lecturers: doc. RNDr. Ľubomír Salanci, PhD.					
Last change: 25.10.2017					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: doc. RNDr. Vladimír Toma, PhD.					

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: 654					
A	B	C	D	E	FX
60,4	15,9	10,09	4,74	1,83	7,03
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 399					
A	B	C	D	E	FX
65,66	15,79	9,02	4,01	1,0	4,51
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 196					
A	B	C	D	E	FX
70,41	17,35	8,67	2,55	0,0	1,02
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 138					
A	B	C	D	E	FX
75,36	13,04	7,25	2,9	0,72	0,72
Lecturers: PhDr. Elena Klátiková					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KMANM/1-MAT-715/15		Course title: Seminar in MS-Office			
Educational activities: Type of activities: seminar 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:					
Antirequisites: FMFI.KMANM/1-MAT-715/00					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 123					
A	B	C	D	E	FX
53,66	17,07	8,13	8,13	3,25	9,76
Lecturers: RNDr. Peter Švaňa, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 208					
A	B	C	D	E	FX
99,52	0,0	0,48	0,0	0,0	0,0
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Branislav Nedbálek					
Last change: 25.05.2016					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 128					
A	B	C	D	E	FX
99,22	0,0	0,0	0,0	0,0	0,78
Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Branislav Nedbálek					
Last change: 25.05.2016					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Branislav Nedbálek					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

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: 1					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Branislav Nedbálek					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-MXX-501/15		Course title: Statistics for Non-statisticians			
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:					
Educational level: I.					
Prerequisites:					
Antirequisites: FMFI.KAMŠ/1-MXX-501/14					
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
85,19	0,0	0,0	3,7	0,0	11,11
Lecturers: doc. Mgr. Ján Mačutek, PhD.					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 3					
A	B	C	D	E	FX
66,67	33,33	0,0	0,0	0,0	0,0
Lecturers: Mgr. Ing. Jana Kočvarová					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 10					
A	B	C	D	E	FX
70,0	0,0	0,0	20,0	10,0	0,0
Lecturers: Mgr. Ing. Jana Kočvarová					
Last change:					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KAMŠ/1-MMN-380/00		Course title: Time Series Analysis			
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.KMANM/1-MMN-250/17 - Mathematical Analysis (4) and FMFI.KAMŠ/1-MAT-282/00 - Probability and Statistics (2)					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Decomposition of time series. Modelling of the trend by mathematical functions. The moving average method. Exponential smoothing. Seasonal components. Tests of randomness. The ARIMA models. The Box - Jenkins methodology. Linear dynamical models of time series.					
Recommended literature: T. Cipra: Analýza časových řad s aplikacemi v ekonomii. SNTL / Alfa, Praha 1986. J. Chajdiak, J. Komorník, M. Komorníková: Štatistické metódy. STATIS, Bratislava 1999. J. Anděl: Statistická analýza časových řad. SNTL, Praha 1976.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 415					
A	B	C	D	E	FX
41,69	25,06	15,9	11,81	4,34	1,2
Lecturers: doc. RNDr. Karol Pastor, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KAI/1-MMN-215/00		Course title: User Mathematical and Economic Software			
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: 3.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 100/0					
Learning outcomes:					
Class syllabus: Characteristics of MS Office. Word processor MS Word. WEB pages creation. Making presentations in MS PowerPoint. Spreadsheet processor MS Excel.					
Recommended literature: T. Šimek, J. Vacek: Microsoft Word - učebnice pro pokročilé, Computer Press, 1998. T. Šimek, J. Vacek: Microsoft Excel pro pokročilé, Computer Press, 1997. Ch. Solomon: Tvorba aplikácií v Microsoft Office 97, Computer Press, 1998. P. Satrapa: Web design, Neokortex s.r.o., 1997.					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 251					
A	B	C	D	E	FX
78,49	9,56	4,38	3,19	2,79	1,59
Lecturers: Ľubomír Lúčan, CSc.					
Last change: 02.06.2015					
Approved by: doc. RNDr. Vladimír Toma, PhD.					