

Course descriptions

TABLE OF CONTENTS

1. 3-MAM-002/15	Analysis of Models in Financial Mathematics.....	2
2. 3-MAM-014/00	Asymptotic Methods.....	3
3. 3-MAM-005/00	Biomathematics.....	5
4. 3-MXX-101/15	Course of English for PhD Studies (1).....	6
5. 3-MXX-102/15	Course of English for PhD Studies (1).....	7
6. 3-MAM-806/15	Creation of Teaching Texts and Aids.....	8
7. 3-MAM-203/10	Department Seminar (1).....	9
8. 3-MAM-204/10	Department Seminar (2).....	10
9. 3-MAM-205/10	Department Seminar (3).....	11
10. 3-MAM-206/10	Department Seminar (4).....	12
11. 3-MAM-990/15	Dissertation Thesis Defense (state exam).....	13
12. 3-MAM-031/15	Fundamentals of Mathematical Modelling in Empirical Sciences.....	14
13. 3-MAMum-202/20	Fundamentals of Statistical Inference for Applied Mathematics.....	15
14. 3-MAM-803/15	Guidance of a Final Thesis or of a Project for the Students' Conference.....	16
15. 3-MAM-804/10	Guidance of the Students' Research Project.....	17
16. 3-MAM-101/15	Individual Study of Science and Research Resources (1).....	18
17. 3-MAM-104/15	Individual Study of Science and Research Resources (2).....	19
18. 3-MAM-001/15	Interior-point methods in linear programming.....	20
19. 3-MAM-009/15	Models of Fluids Dynamics.....	21
20. 3-MAM-007/15	Modern Methods of Convex Optimization.....	23
21. 3-MAMum-201/20	Nonlinear Analysis of Time Series.....	24
22. 3-MAM-024/10	Nonlinear Statistical Models.....	25
23. 3-MAM-701/15	Obtaining the Comenius University Grant for the Young.....	26
24. 3-MAM-805/10	Participation in a Conference Organising Committee.....	27
25. 3-MAM-950/15	Passing Dissertation Examination (state exam).....	28
26. 3-MAM-403/15	Presentation at a Homeland Conference or Department Seminar.....	29
27. 3-MAM-401/15	Presentation at an International Conference.....	30
28. 3-MAM-018/10	Probability Theory.....	31
29. 3-MAM-302/15	Publication in a Reviewed Periodical or Reviewed Almanac.....	32
30. 3-MAM-301/15	Publication in an A-category Periodical.....	33
31. 3-MAM-030/15	Random Dynamic Systems.....	34
32. 3-MAM-706/15	Response to a Publication.....	35
33. 3-MAM-704/15	Response to a WoK- or SCOPUS-registered Publication.....	36
34. 3-MAM-702/15	Scientific Project Co-researcher.....	37
35. 3-MAMum-204/20	Selected Nonparametric Statistical Methods.....	38
36. 3-MAM-003/00	Selected Topics from Financial Mathematics.....	39
37. 3-MAM-032/16	Selected Topics in Probability Distributions.....	40
38. 3-MAM-025/10	Simulation Methods.....	41
39. 3-MAMum-203/20	Statistical Models for Data Analysis.....	43
40. 3-MAM-019/10	Stochastic Models in Insurance and Actuarial Science.....	44
41. 3-MAM-807/10	Study Stay Abroad.....	45
42. 3-MAM-802/15	Teaching Practice in the Summer Semester.....	46
43. 3-MAM-801/15	Teaching Practice in the Winter Semester.....	47
44. 3-MAM-808/15	Writing Final Thesis Assessment Protocol.....	48

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-002/15	Course title: Analysis of Models in Financial 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: 10	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: prof. RNDr. Daniel Ševčovič, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-014/00	Course title: Asymptotic Methods
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements: Continuous assessment: homework, exam during the semester Exam: written and oral Approximate grading scale: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 30/70	
Learning outcomes: To give an overview of basic asymptotic methods for solving algebraic and differential problems in applied mathematics.	
Class syllabus: Algebraic equations: Iterative method. Algebraic equations: Expansion method. Singular perturbations and rescaling. Logarithmic Poincare's expansions. Convergence and asymptoticity. Asymptotic approximation of integrals. Watson's lemma. The steepest descent method. Regular perturbation problems in differential equations. Singular perturbation problems in differential equations. Method of matched asymptotic expansions. Multiple scale method. WKBJ method. Poincare-Lindstedt method. Radius of convergence and Domb-Sykes plots.	
Recommended literature: Perturbation Methods / E. J. Hinch. Cambridge, Cambridge University Press, 1991 Multiple Scale and Singular Perturbation Methods / Kevorkian, J., Cole, J. D. Springer, 1996	
Languages necessary to complete the course: English	
Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers: doc. RNDr. Peter Guba, PhD.	
Last change: 01.05.2017	

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-005/00	Course title: Biomathematics
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: 10	
Recommended semester: 3.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus: Deterministic models, population dynamics with discrete and continuous time, biological oscillators, reaction-diffusion systems, epidemiology models, bifurcations, chaos.	
Recommended literature: Murray, J. D.: Mathematical biology, Springer Berlin, 1989.	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 1	
ABS	NEABS
100,0	0,0
Lecturers: doc. Mgr. Richard Kollár, PhD., prof. RNDr. Marek Fila, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KJP/3-MXX-101/15				Course title: Course of English for PhD Studies (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 1.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 120							
A	ABS	B	C	D	E	FX	NEABS
70,0	25,83	0,83	0,0	0,0	3,33	0,0	0,0
Lecturers: PhDr. Alena Zemanová							
Last change: 22.02.2019							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KJP/3-MXX-102/15				Course title: Course of English for PhD Studies (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 2.							
Educational level: III.							
Prerequisites: FMFL.KJP/3-MXX-101/15 - Course of English for PhD Studies (1)							
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	ABS	B	C	D	E	FX	NEABS
71,54	21,95	0,0	0,0	0,0	0,0	0,0	6,5
Lecturers: PhDr. Alena Zemanová							
Last change: 22.02.2019							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-806/15	Course title: Creation of Teaching Texts and Aids
Educational activities: Type of activities: independent work Number of hours: per week: 5 per level/semester: 70 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 5	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-203/10	Course title: Department Seminar (1)
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Daniel Ševčovič, DrSc., prof. RNDr. Pavol Quittner, DrSc., doc. RNDr. Margaréta Halická, CSc., doc. Mgr. Radoslav Harman, PhD., prof. RNDr. Andrej Pázman, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-204/10	Course title: Department Seminar (2)
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Daniel Ševčovič, DrSc., doc. RNDr. Margaréta Halická, CSc., prof. RNDr. Pavol Quittner, DrSc., doc. Mgr. Radoslav Harman, PhD., prof. RNDr. Andrej Pázman, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-205/10	Course title: Department Seminar (3)
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 6.	
Educational level: III.	
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	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Daniel Ševčovič, DrSc., prof. RNDr. Pavol Quittner, DrSc., doc. RNDr. Margaréta Halická, CSc., doc. Mgr. Radoslav Harman, PhD., prof. RNDr. Andrej Pázman, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-206/10	Course title: Department Seminar (4)
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: prof. RNDr. Daniel Ševčovič, DrSc., doc. RNDr. Margaréta Halická, CSc., prof. RNDr. Pavol Quittner, DrSc., doc. Mgr. Radoslav Harman, PhD., prof. RNDr. Andrej Pázman, DrSc.	
Last change: 02.06.2015	
Approved by:	

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-990/15	Course title: Dissertation Thesis Defense
Number of credits: 30	
Recommended semester: 7., 8..	
Educational level: III.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-031/15	Course title: Fundamentals of Mathematical Modelling in Empirical Sciences
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: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. Mgr. Ján Mačutek, PhD.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3- MAMum-202/20	Course title: Fundamentals of Statistical Inference for Applied 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: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. RNDr. Viktor Witkovský, CSc.	
Last change: 17.07.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-803/15	Course title: Guidance of a Final Thesis or of a Project for the Students' Conference
Educational activities: Type of activities: other Number of hours: per week: 5 per level/semester: 70 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-804/10	Course title: Guidance of the Students' Research Project
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 7	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers:	
Last change:	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-101/15	Course title: Individual Study of Science and Research Resources (1)
Educational activities: Type of activities: independent work Number of hours: per week: 10 per level/semester: 140 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 6	
ABS	NEABS
83,33	16,67
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-104/15	Course title: Individual Study of Science and Research Resources (2)
Educational activities: Type of activities: independent work Number of hours: per week: 10 per level/semester: 140 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 7	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-001/15	Course title: Interior-point methods in linear programming
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: 10	
Recommended semester: 1.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 2	
ABS	NEABS
100,0	0,0
Lecturers: doc. RNDr. Margaréta Halická, CSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-009/15	Course title: Models of Fluids Dynamics
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: 10	
Recommended semester: 3.	
Educational level: III.	
Prerequisites:	
Course requirements: Continuous assessment: individual work, project preparation Exam: Exam Approximate rating: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 30/70	
Learning outcomes: Teach the students to derive and analyse basic equations describing fluid flow.	
Class syllabus: Equations of motion for ideal fluids. Vorticity. Irrotational flow. Vorticity equation. Equations of motion for viscous fluids. Examples of simple viscous flows. Flows with circular streamlines. Convection and diffusion of vorticity. Gravity waves. Dispersion and group velocity. Surface tension effects and capillary waves. Internal gravity waves. Waves with finite amplitude. Hydraulic shocks and solitary waves. Kelvin--Helmholtz instability. Thermal convection. Centrifugal instability. Theorem on the stability of shear flow. General theorem on the stability of viscous flow. Uniqueness of steady viscous flow. Transition to turbulence.	
Recommended literature: Elementary Fluid Dynamics / D. J. Acheson. Oxford: Clarendon Press, 1990 An Introduction to Fluid Dynamics / G. K. Batchelor. Cambridge University Press, 2000	
Languages necessary to complete the course: English	
Notes:	
Past grade distribution Total number of evaluated students: 1	
ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Peter Guba, PhD.
Last change: 01.05.2017
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-007/15	Course title: Modern Methods of Convex Optimization
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: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. RNDr. Mária Trnovská, PhD.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3- MAMum-201/20	Course title: Nonlinear Analysis of Time Series
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: 10	
Recommended semester: 2.	
Educational level: III.	
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	
ABS	NEABS
0,0	100,0
Lecturers: RNDr. Anna Krakovská, CSc.	
Last change: 17.07.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-024/10	Course title: Nonlinear Statistical 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: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: prof. RNDr. Andrej Pázman, DrSc., doc. Mgr. Radoslav Harman, PhD.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-701/15	Course title: Obtaining the Comenius University Grant for the Young
Educational activities: Type of activities: independent work Number of hours: per week: 20 per level/semester: 280 Form of the course: on-site learning	
Number of credits: 20	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 2	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-805/10	Course title: Participation in a Conference Organising Committee
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 3	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers:	
Last change:	
Approved by:	

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-950/15	Course title: Passing Dissertation Examination
Number of credits: 20	
Recommended semester: 3., 4..	
Educational level: III.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-403/15	Course title: Presentation at a Homeland Conference or Department Seminar
Educational activities: Type of activities: independent work Number of hours: per week: 5 per level/semester: 70 Form of the course: on-site learning	
Number of credits: 5	
Recommended semester: 4.	
Educational level: III.	
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	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-401/15	Course title: Presentation at an International Conference
Educational activities: Type of activities: independent work Number of hours: per week: 20 per level/semester: 280 Form of the course: on-site learning	
Number of credits: 20	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 5	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-018/10	Course title: Probability 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: 10	
Recommended semester: 1.	
Educational level: III.	
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	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Anatolij Dvurečenskij, DrSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-302/15	Course title: Publication in a Reviewed Periodical or Reviewed Almanac
Educational activities: Type of activities: independent work Number of hours: per week: 15 per level/semester: 210 Form of the course: on-site learning	
Number of credits: 15	
Recommended semester: 6.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 5	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-301/15	Course title: Publication in an A-category Periodical
Educational activities: Type of activities: independent work Number of hours: per week: 30 per level/semester: 420 Form of the course: on-site learning	
Number of credits: 30	
Recommended semester: 6.	
Educational level: III.	
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	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-030/15	Course title: Random Dynamic Systems
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 2.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. RNDr. Katarína Janková, CSc.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-706/15	Course title: Response to a Publication
Educational activities: Type of activities: other Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-704/15	Course title: Response to a WoK- or SCOPUS-registered Publication
Educational activities: Type of activities: other Number of hours: per week: 6 per level/semester: 84 Form of the course: on-site learning	
Number of credits: 6	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-702/15	Course title: Scientific Project Co-researcher
Educational activities: Type of activities: independent work Number of hours: per week: 10 per level/semester: 140 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 6	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3- MAMum-204/20	Course title: Selected Nonparametric Statistical Methods
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 3.	
Educational level: III.	
Prerequisites: FMFI.KAMŠ/3-MAM-018/10 - Probability Theory	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. RNDr. František Rublík, CSc.	
Last change: 17.07.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-003/00	Course title: Selected Topics from Financial 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: 10	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus: - Selected interest rate models - Multi-period models of portfolio theory - Derivative pricing with transaction costs - Portfolio risk management	
Recommended literature: Wilmott, P., Dewynne, J, Howison, S.: Option Pricing, Mathematical Models and Computations, UK: Oxford Financial Press, 1995 Kwok, Y.K.: Mathematical models of financial derivatives, Berlin, Springer Verlag, 1998. Hull, J.: Options, futures and other derivative securities, New York, Prentice Hall, 1989.	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 1	
ABS	NEABS
100,0	0,0
Lecturers: doc. Mgr. Igor Melicherčík, PhD.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-032/16	Course title: Selected Topics in Probability Distributions
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 2., 4.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. Mgr. Ján Mačutek, PhD.	
Last change:	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3-MAM-025/10	Course title: Simulation Methods
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning	
Number of credits: 10	
Recommended semester: 2., 4.	
Educational level: III.	
Prerequisites:	
Course requirements: Preliminary semester evaluation: projects Final examination: oral examination Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 50/50	
Learning outcomes: After completing the course, students will be able to use advanced techniques of variance reduction and simulation generation of random vectors and processes.	
Class syllabus: Selected methods of simulation sampling of random vectors and random processes (uniform and non-uniform generation on the surface and in the interior of multi-dimensional spheres and polyhedrons, sampling of processes used in financial mathematics). Advanced variance reduction techniques and simulation of rare events.	
Recommended literature: Ross S: Simulation, Elsevier Academic Press 2006 Fishman GS: Monte Carlo: Concepts, Algorithms and Applications, Springer 1996 Selected scientific papers	
Languages necessary to complete the course: Slovak, English	
Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
75,0	25,0
Lecturers: doc. Mgr. Radoslav Harman, PhD.	
Last change: 08.05.2017	

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/3- MAMum-203/20	Course title: Statistical Models for Data Analysis
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: 10	
Recommended semester: 2.	
Educational level: III.	
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	
ABS	NEABS
0,0	100,0
Lecturers: doc. RNDr. Viktor Witkovský, CSc.	
Last change: 17.07.2020	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-019/10	Course title: Stochastic Models in Insurance and Actuarial Science
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: 10	
Recommended semester: 3.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers: doc. RNDr. Rastislav Potocký, PhD., Mgr. Gábor Szűcs, PhD.	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-807/10	Course title: Study Stay Abroad
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning	
Number of credits: 3	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0
Lecturers:	
Last change:	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-802/15	Course title: Teaching Practice in the Summer Semester
Educational activities: Type of activities: other Number of hours: per week: 8 per level/semester: 112 Form of the course: on-site learning	
Number of credits: 8	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 11	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-801/15	Course title: Teaching Practice in the Winter Semester
Educational activities: Type of activities: other Number of hours: per week: 8 per level/semester: 112 Form of the course: on-site learning	
Number of credits: 8	
Recommended semester:	
Educational level: III.	
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	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KAMŠ/3-MAM-808/15	Course title: Writing Final Thesis Assessment Protocol
Educational activities: Type of activities: independent work 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: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 7	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 02.06.2015	
Approved by:	