Course descriptions

TABLE OF CONTENTS

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-610/09	Algebraic Number Theory

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 14

A	B	C	D	E	FX
64,29	7,14	21,43	7,14	0,0	0,0

Lecturers: doc. RNDr. Martin Mačaj, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-223/09	Algebraic Topology

Educational activities:
Type of activities: lecture
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: II., III.

Prerequisites:

Course requirements:
examination

Learning outcomes:
Subject aim: to acquaint students with basic ideas, methods and some applications of algebraic topology.

Class syllabus:
The problem of homeomorphy. Constructions of new topological spaces by forming quotient spaces. Attaching a cell to a topological space. Surfaces and topological manifolds. Path-connectedness. Homotopy. Fundamental group. Basic homology theory. Homology groups of spheres and their applications. Cohomology groups, cohomology ring, and applications.

Recommended literature:
A. Hatcher, Algebraic Topology. Cambridge University Press 2002
A. Kriegl, Algebraic Topology. Lecture Notes. University of Vienna, Vienna 2008, accessible at http://www.mat.univie.ac.at/~kriegl/Skripten/alg-top.pdf
W. Massey, A Basic Course in Algebraic Topology. Springer-Verlag, New York 1991
E. Spanier, Algebraic Topology. Springer-Verlag, New York 1995

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 37

A	ABS	B	C	D	E	FX	NEABS
48,65	0,0	27,03	10,81	8,11	5,41	0,0	0,0

Lecturers: prof. RNDr. Július Korbaš, CSc., doc. Mgr. Tibor Macko, PhD.

Last change: 10.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/2-INF-278/18	Analytic and Enumerative Combinatorics

Educational activities:
Type of activities: lecture
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2., 4.

Educational level: I., II.

Prerequisites:

Recommended prerequisites:
2-INF-277/18 Complex Analysis for Computer Scientists or 1-MAT-416/15 Theory of Complex Variable Functions

Course requirements:
homework assignments, written and oral exam
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
Students will understand the key methods of analytic combinatorics and will be able to apply their theoretical knowledge on the fields of combinatorial enumeration and algorithm analysis.

Class syllabus:
Formal power series and generating functions. Enumeration of labelled and unlabelled structures, classical enumeration methods. The methodology of analytic combinatorics. The symbolic method of specifying combinatorial structures, its connection to formal languages. Generating functions as analytical objects, their singularities, Pringsheim's theorem. Asymptotic analysis of coefficients of rational and meromorphic functions. Singularity analysis. Coefficients of algebraic functions. The saddle-point method. Multivariate analytic combinatorics. Applications.

Recommended literature:
Electronic materials on the course website.
Analytic Combinatorics / Philippe Flajolet, Robert Sedgewick. Cambridge : Cambridge University Press, 2009
Analytic Combinatorics in Several Variables / Robin Pemantle, Mark C. Wilson. New York : Cambridge University Press, 2013
Enumerative Combinatorics, vol. 1 / Richard P. Stanley. Cambridge : Cambridge University Press, 1997
Enumerative Combinatorics, vol. 2 / Richard P. Stanley. Cambridge : Cambridge University Press, 1999
Asymptotic Methods in Analysis / Nicolaas Govert de Bruijn. Amsterdam : North-Holland, 1961

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Peter Kostolányi, PhD.

Last change: 25.06.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-226/14	Applications of set theory

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:
Students will be able to apply more advanced set-theoretic techniques (mainly Zorn's lemma and transfinite induction) to problems from various areas of mathematics.

Class syllabus:
Axiom of choice and its equivalents. Zorn lemma and its applications. Ordinals, transfinite induction and its applications. Almost disjoints systems, infinite trees, ultrafilters.

Recommended literature:
Combinatorial set theory : With a gentle introduction to forcing / Lorenz J. Halbeisen. London : Springer, 2012

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4

A	B	C	D	E	FX
75,0	0,0	0,0	0,0	0,0	25,0

Lecturers: RNDr. Martin Sleziak, PhD.

Last change: 11.04.2021

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-123/15	Calculus of Variations

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 2.

Educational level: II., III.

Prerequisites:

Antirequisites: FMFI.KAMŠ/2-MAT-123/09

Course requirements:
Preliminary grading: homeworks.
Exam: written and oral.
Grading: A 90%, B 80%, C 70%, D 60%, E 50%.
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
The students will learn to differentiate variational integrals and related Nemytskii mappings, they will be able to verify necessary and sufficient conditions guaranteeing the existence of global and local extrema of particular functionals, to find extrema in the case of one-dimensional integrals and find out, whether these extrema are weak or strong.

Class syllabus:
Differentiability of the Nemytskii mapping, basic existence theorem for global extrema, necessary and sufficient conditions for local extrema,
constrained extrema, the Euler and Jacobi equations, necessary and sufficient conditions for strong and weak extrema of one-dimensional integrals, investigation of critical points of particular functionals.

Recommended literature:
B. Dacorogna: Direct methods in the calculus of variations, Springer, Berlin - Heidelberg 2008.
M. Struwe: Variational methods, Springer, Berlin - Heidelberg 2008.
J.L. Troutman: Variational calculus and Optimal Control, Springer, New York 1996.
G. Buttazzo, M. Giaquinta, S. Hildebrandt: One-dimensional variational problems, Clarendon Press, Oxford 1998.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 7

A	ABS	B	C	D	E	FX	NEABS
42,86	0,0	28,57	0,0	14,29	0,0	14,29	0,0

Lecturers: prof. RNDr. Pavol Quittner, DrSc.

Last change: 28.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-617/09	Category Theory (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: 3.

Educational level: II., 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: 25

A	ABS	B	C	D	E	FX	NEABS
96,0	0,0	0,0	0,0	0,0	0,0	4,0	0,0

Lecturers: doc. RNDr. Juraj Činčura, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-622/09	Category Theory (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: 4.

Educational level: II., 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

A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Juraj Činčura, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-232/09	Computer Algebra (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: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 42

A	B	C	D	E	FX
85,71	9,52	2,38	0,0	2,38	0,0

Lecturers: doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-241/09	Computer Algebra (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: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 44

A	B	C	D	E	FX
81,82	6,82	9,09	0,0	2,27	0,0

Lecturers: doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-EFM-117/12	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: 3

Recommended semester: 2.

Educational level: II.

Prerequisites:

Recommended prerequisites:
Nonlinear programming, Linear programming

Course requirements:
Homeworks, Project presentation
Grading A 91%, B 81%, C 71%, D 61%, E 51%
Scale of assessment (preliminary/final): 60/40

Learning outcomes:
Student learn the basic theory of convex analysis and convex (conic) optimization,
basic classes of convex conic programming, and methods for solving them, they are able to use Matlab and CVX modeling system for solving convex problems, they are able to solve various practical problems and applications.

Class syllabus:
Convex optimization problems in standard form
Generalization of standard convex problems
Conic convex problems (SDP, SOCP,..)
Geometry of convex cones
Duality theory for conic linear programs
Applications of convex conic problems
Conic relaxations
Interior point methods

Recommended literature:
1. Boyd, Vandenberghe: Convex Optimization, Cambridge Univ.Press 2004
2. CVX: Matlab Software for Disciplined Convex Programming www.stanford.edu/~boyd/cvxbook
3. Ben-Tal, Nemirovski: Lectures on Modern Convex Optimization, SIAM 2001

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 88

A	B	C	D	E	FX
75,0	11,36	6,82	2,27	2,27	2,27

Lecturers: doc. RNDr. Mária Trnovská, PhD.

Last change: 16.05.2018

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/1-INF-640/00	Cryptology (1)

Educational activities:
Type of activities: lecture
Number of hours:
per week: 4 **per level/semester:** 56
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
1. Introduction to cryptology, encryption
2. Block cipher (design, multiple encryption, modes of operation, AES)
3. Stream ciphers (design, properties)
4. Public key cryptography - introduction
5. RSA (initialization, soundness, implementation, security)
6. Quadratic residues/non-residues (characterization, relation to factorization)
7. Rabin public key system
8. Discrete logarithm (Pohlig-Hellman algorithm)
9. ElGamal system (initialization, soundness, security)
10. Hash functions (birthday attack, MAC)
11. Digital signatures (RSA scheme, ElGamal scheme, DSA, blind signatures)
12. Secret sharing schemes
13. Cryptographic protocols (Diffie-Hellman, Interlock, trusted third party)
14. Attacks on protocols (replay attack, symmetry, protocols interaction, etc.)
15. Practical recommendation for protocols design
16. BAN logic (language, rules, analysis of Needham-Schroeder protocol)

Recommended literature:
M. Stanek, Základy kryptológie, In Slovak, http://www.dcs.fmph.uniba.sk/~stanek/crypto/main2.pdf

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 153

A	B	C	D	E	FX
19,61	5,88	17,65	16,99	30,72	9,15

Lecturers: doc. RNDr. Martin Stanek, PhD.
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-214/09	Differential Topology

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: 4

Recommended semester: 1.

Educational level: II., III.

Prerequisites:

Course requirements:
examination

Learning outcomes:
Subject aim: to acquaint students with basic ideas, methods and some applications of differential topology.

Class syllabus:
A review of selected basic notions of general topology. Differentiable manifolds and differentiable maps. Tangent vector space. The differential of a differentiable map at a point. Tangent bundles. Submanifolds. Immersions and embeddings of manifolds. Inverse Function Theorem and its corollaries; transversality. Regular and critical points, regular and critical values, Sard's Theorem. Proof of the fundamental theorem of algebra.

Recommended literature:
M. Hirsch, Differential Topology. Springer-Verlag, New York 1976.
J. Milnor, Topology from the Differential Viewpoint, The Univ. Press of Virginia, Charlottesville 1965.
I. Singer, J. Thorpe, Lecture Notes on Elementary Topology and Geometry, Scott, Foresman and Co., Glenview, Illinois 1967.
F. Warner, Foundations of Differentiable Manifolds and Lie Groups. Springer-Verlag, Berlin 1983.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 40

A	ABS	B	C	D	E	FX	NEABS
60,0	0,0	7,5	20,0	2,5	5,0	5,0	0,0

Lecturers: prof. RNDr. Július Korbaš, CSc., doc. Mgr. Tibor Macko, PhD.

Last change: 10.04.2017
Approved by:

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KMANM/2-MAT-991/15	**Course title:** Diploma Thesis Defense
Number of credits: 12	
Educational level: II.	
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:	**Course title:**
FMFI.KMANM/2-MAT-920/15	Diploma Thesis Seminar

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: 4

Recommended semester: 4.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-920/11

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 20

A	B	C	D	E	FX
90,0	0,0	0,0	0,0	5,0	5,0

Lecturers: prof. RNDr. Ján Filo, CSc., doc. RNDr. Eugen Viszus, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-111/15	Dynamical Systems

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 1.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-111/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
57,89	5,26	21,05	5,26	0,0	10,53

Lecturers: prof. RNDr. Milan Medveď, DrSc., prof. RNDr. Michal Fečkan, DrSc., RNDr. František Jaroš, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-233/13	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: 1., 3.

Educational level: I., II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 100/0

Learning outcomes:

Class syllabus:
The content of the course is general English.
The language level is B2/C1 (Upper-Intermediate/Lower Advanced).

Recommended literature:
Selection of materials from Inside Out Upper-Intermediate, Cutting Edge Upper-Intermediate, New English File Upper-Intermediate, British and American newspapers and journals
Recordings: authentic and semi-authentic (source: BBC, CNN, coursebook recordings)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 193

A	B	C	D	E	FX
65,28	13,99	7,25	2,07	1,55	9,84

Lecturers: PhDr. Elena Klátiková, Mgr. Aneta Barnes

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-234/13	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: 2., 4.

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: 118

A	B	C	D	E	FX
73,73	15,25	4,24	0,85	0,0	5,93

Lecturers: PhDr. Elena Klátiková, Mgr. Aneta Barnes

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-215/12	Field Theory (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: 1.

Educational level: II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 20/80

Learning outcomes:

Class syllabus:
Field extensions. Finite fields. Introduction to the Galois theory. Fundamental theorem of algebra.

Recommended literature:
Birkhoff, G., MacLane, S: Prehľad modernej algebry
Lang, S.: Algebra
Niederreiter, H., Lidl, R.: Theory of fields
Crandall, R., Pomerance, C.: Prime numbers, a computational perspective

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
52,0	16,0	12,0	4,0	8,0	8,0

Lecturers: doc. RNDr. Martin Mačaj, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-216/12	Field Theory (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: 2.

Educational level: II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 20/80

Learning outcomes:

Class syllabus:
Generation of finite fields. Rabin-Miller and Agrawal-Kayena-Saxena test for primality. Applications in cryptography: RSA and XTR. Wedderburn's theorem.

Recommended literature:
Birkhoff, G., MacLane, S: Prehľad modernej algebry
Lang, S.: Algebra
Niederreiter, H., Lidl, R.: Theory of fields
Crandall, R., Pomerance, C.: Prime numbers, a computational perspective

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 22

A	B	C	D	E	FX
77,27	18,18	4,55	0,0	0,0	0,0

Lecturers: doc. RNDr. Martin Mačaj, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-315/19	Finite Difference Methods for Differential Equations

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: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-EFM-101/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
48,0	12,0	16,0	12,0	12,0	0,0

Lecturers: Mgr. Jela Babušíková, PhD., Mgr. Katarína Boďová, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-323/09	Finite Elements Method (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: 4

Recommended semester: 2.

Educational level: II.

Prerequisites: FMFI.KMANM/2-MAT-325/12 - Variational Methods in Differential Equations

Course requirements:

Learning outcomes:

Class syllabus:
Variational formulation for linear,elliptic boundary value problems; Ritz and Galerkin method (Lemma of Cea); construction of basis functions for finit dimensional approximation spaces; local and global variational formulation; asembling; convergence; error estimates for 1D and 2D linear interpolation.

Recommended literature:
M. Slodička: Metóda konečných prvkov; (v tlači) je v elektronickej forme dostupná
J. Kačur: Numerické metódy riešenia PDR (v elektronickej forme)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 40

A	B	C	D	E	FX
42,5	25,0	17,5	10,0	0,0	5,0

Lecturers: prof. RNDr. Jozef Kačur, DrSc., prof. RNDr. Ján Filo, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-334/10	Finite Elements Method (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: 3.

Educational level: II.

Prerequisites: FMFI.KMANM/2-MAT-323/09 - Finite Elements Method (1)

Course requirements:
Scale of assessment (preliminary/final): 30/70

Learning outcomes:

Class syllabus:
Variational crimes; 1. and 2. Lemma of Strang; approximation of boundary conditions; nonconformal method of finite elements; Mixed finite element method; practical solution using software PLTMG; solution of stationary 2D problems in practical implementation.

Recommended literature:
M. Slodička: Metóda konečných prvkov; (v tlači) je v elektronickej forme dostupná
J. Kačur: Numerické metódy riešenia PDR (v elektronickej forme)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 26

A	B	C	D	E	FX
50,0	0,0	26,92	7,69	11,54	3,85

Lecturers: prof. RNDr. Jozef Kačur, DrSc., prof. RNDr. Ján Filo, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-141/00	French Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
French language is taught at two levels: beginner and intermediate. Students opt for one of them depending on whether they wish to obtain the fundamentals of the language or wish to maintain and/or improve previous knowledge of French.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 421

A	B	C	D	E	FX
45,13	20,43	19,48	9,03	1,9	4,04

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-142/00	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: 259

A	B	C	D	E	FX
38,22	25,87	20,08	10,42	2,7	2,7

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-241/00	French Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course of intermediate French language, covering not only general, but also technical language.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2
Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983
Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 101

A	B	C	D	E	FX
37,62	28,71	21,78	6,93	0,99	3,96

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-242/00	French Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course of intermediate French covering not only general, but also technical French language.

Recommended literature:
Pravda, Pravdová: Učebnica francúzštiny pre samoukov a kurzy, SPN Bratislava 1999, ISBN 80-08-00431-2
Blažena Srncová: Učebnica francúzštiny pre študentov Matematicko-fyzikálnej fakulty , UK 1983
Kolektív Lingea, s.r.o.: Slovensko-francúzsky hovorník, Bratislava 2008
Zarha Lahmidi: Sciences-techniques.com, ISBN 209-0331186-0, CLE international, 2005

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 71

A	B	C	D	E	FX
39,44	33,8	18,31	2,82	1,41	4,23

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-115/12	Functional Analysis

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: II.

Prerequisites:

Course requirements:
Preliminary grading: homeworks.
Exam: written and oral.
Grading: A 90%, B 80%, C 70%, D 60%, E 50%.
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
The students will learn to determine the spectrum of certain types of linear operators, the convergence of operators and functions in various topologies and function spaces, and perform basic operations with distributions.

Class syllabus:
Compact operators and Fredholm's alternative, spectrum of closed, continuous, compact and self-adjoint operators, locally convex spaces and continuous linear operators in these spaces, weak topologies and compactness in weak topologies, distributions.

Recommended literature:
W. Rudin: Functional Analysis, McGraw-Hill, New York 1973.
K. Yosida: Functional Analysis, Springer, Berlin, Heidelberg 1980.
A.E. Taylor: Introduction to Functional Analysis, John Wiley & Sons, New York 1958.
A.W. Naylor & G.R. Sell: Linear operator theory in engineering and science, Holt, Rinehart & Winston, New York, 1971.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 27

A	B	C	D	E	FX
55,56	14,81	22,22	3,7	3,7	0,0

Lecturers: prof. RNDr. Pavol Quittner, DrSc.

Last change: 28.04.2017
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-211/15	General Topology

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: 1.

Educational level: II., III.

Prerequisites:

Antirequisites: FMFI.KAGDM/2-MAT-211/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 12

A	ABS	B	C	D	E	FX	NEABS
66,67	0,0	25,0	0,0	0,0	0,0	8,33	0,0

Lecturers: doc. RNDr. Juraj Činčura, CSc.

Last change: 11.04.2021

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-151/00	German Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
German language is taught at three levels: beginner, intermediate and advanced. Students opt for one of them depending on whether they need to learn the fundamentals or maintain and/or improve their previous knowledge.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 717

A	B	C	D	E	FX
35,43	27,62	19,8	9,21	2,79	5,16

Lecturers: Mgr. Alexandra Maďarová, Mgr. Marián Mancovič

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-152/00	German Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course continues the program of German language (1). German language is taught at three levels: beginner, intermediate, advanced.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 468

A	B	C	D	E	FX
35,47	20,51	20,73	13,46	3,42	6,41

Lecturers: Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-251/00	German Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of German language (2). It provides a course of intermediate and advanced German language.

Recommended literature:
Vilášek, P.: Nemčina pre študentov FMFI, Na webovej stránke autora v elektronickej podobe.
Aus moderner Technik und Naturwissenschaft, 1999, Max Hueber Verlag, D-85737, ISBN 3-19-001629-1

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 158

A	B	C	D	E	FX
39,24	26,58	21,52	6,96	2,53	3,16

Lecturers: Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-252/00	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: 85

A	B	C	D	E	FX
40,0	25,88	12,94	11,76	3,53	5,88

Lecturers: Mgr. Alexandra Maďarová

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-401/12	Graph Algorithms

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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 14

A	B	C	D	E	FX
64,29	14,29	7,14	0,0	14,29	0,0

Lecturers: prof. RNDr. Ján Plesník, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-225/15	Group Theory Applications in Discrete Mathematics

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: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 11

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Róbert Jajcay, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM+KAMŠ/2-MAT-314/15	Handling of Modern Software in Numerical Mathematics

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: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-314/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 16

A	B	C	D	E	FX
87,5	12,5	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Peter Guba, PhD., Mgr. Jela Babušíková, PhD.

Last change: 27.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-910/15	Individual Work on Final Thesis (1)

Educational activities:
Type of activities: independent work
Number of hours:
per week: **per level/semester:** 100s
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 2.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-910/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
78,95	5,26	0,0	5,26	10,53	0,0

Lecturers: prof. RNDr. Ján Filo, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-911/15	Individual Work on Final Thesis (2)

Educational activities:
Type of activities: independent work
Number of hours:
per week: **per level/semester:** 100s
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 3.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-911/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 20

A	B	C	D	E	FX
80,0	5,0	15,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Ján Filo, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-114/15	Integral Transforms and Special Functions

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: 1., 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 33

A	B	C	D	E	FX
42,42	27,27	6,06	3,03	6,06	15,15

Lecturers: 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:	**Course title:**
FMFI.KAG/2-MAT-601/09	Introduction to Non-standard 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: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Pavol Zlatoš, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-224/09	Linear Codes

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: 4

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 62

A	B	C	D	E	FX
79,03	16,13	3,23	0,0	1,61	0,0

Lecturers: doc. RNDr. Róbert Jajcay, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-PMS-118/10	Markov Processes (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: 1.

Educational level: II.

Prerequisites:

Course requirements:
Preliminary semester evaluation: test and homeworks
Examination: written examination
Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50%

Learning outcomes:
After completing the course the student will master elementary discrete time Markov chains models. He will be able to classify states of a Markov chain and calculate stationary probability distributions.

Class syllabus:
Markov property, transition probabilities, transition matrix, Chapman Kolmogorov equation, irreducibility of a chain. Classification of states, recurrent states, transient states, null recurrent states and positive recurrent states, periodicity. Existence of stationary distribution, ergodic distribution, necessary and sufficient conditions for ergodicity. Random walks, branching processes, absorbtion probabilities, mean time to absorbtion. Markov reward chains algorithms and Markov Chain Monte Carlo.

Recommended literature:
Kalas, J: Markovove reťazce, skriptá MFF UK
Norris, J.R.: Markov chains (1998)
Ross, S.M.: Introduction to probability models (2006)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 240

A	B	C	D	E	FX
21,67	22,08	26,67	20,83	7,5	1,25

Lecturers: doc. RNDr. Katarína Janková, CSc., doc. Mgr. Pavol Bokes, PhD., Candan Çelik

Last change: 02.05.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-PMS-119/15	Markov Processes(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: 5

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:
After completing the course students will know properties of homogeneous Markov chains with continuous time. They will be able to use models based on these chains.

Class syllabus:
Markov property for continuous time chains, probabilities of transition, initial distribution, Chapman Kolmogorov equation. Forces of transition and their properties, backward and forward systems of Kolmogorov differential equations. Statioanary and ergodic distribution of the chain. Models of linear growth, birth and death chains, Poisson process. Characterization of processes using jump chain and holding times. Queueing systems: M/M/n, M/M/infinity. Imbedded chain technique for M/G/1. Pollaczek Chinchin formula.

Recommended literature:
Janková, K., Kilianová, S., Brunovský, P., Bokes, P.: Markovove reťazce a ich aplikácie. Epos 2014.
Norris, J.:Markov Chains.Cambridge University Press 1997.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 88

A	B	C	D	E	FX
25,0	14,77	29,55	22,73	5,68	2,27

Lecturers: doc. RNDr. Katarína Janková, CSc., doc. Mgr. Pavol Bokes, PhD., Candan Çelik

Last change: 20.02.2018

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-616/15	Mathematical Fundamentals of Quantum Theory

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Michal Demetrian, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTF/2-FTF-112/15	Mathematical Physics (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: 8

Recommended semester: 1.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KTFDF/2-FTF-112/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
80,95	14,29	0,0	0,0	4,76	0,0

Lecturers: doc. RNDr. Marián Fecko, PhD.

Last change: 04.10.2016

Approved by:

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KMANM/2-MAT-951/15	**Course title:** Mathematics
Number of credits: 6	
Educational level: II.	
State exam syllabus:	
Last change: 22.01.2018	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAMŠ/2-PMS-116/10	**Course title:** Multivariate Statistical Analyses (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: II.	
Prerequisites:	
Recommended prerequisites: 2-PMS-115 Multivariate Statistical Analyses (1)	
Antirequisites: PriF-FMFI.KAMŠ/N-bBXX-082/15 and FMFI.KAMŠ/2-PMS-116/19	
Course requirements: Preliminary semester evaluation: project 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: Upon satisfactory completion of the course, students will be able to use selected multivariate statistical methods of dimensionality reduction, data clustering, discrimination and classification.	
Class syllabus: 1) Principal components: theoretical properties of principal components, ratio of explained variance, selection of the number of principal components, sample principal components; 2) Metric multidimensional scaling; 3) Factor analysis: model of factor analysis, estimation of factor loadings, factor rotations, estimation of factor scores; 4) Canonical correlations: theoretical properties of canonical correlations, sample canonical correlations, coefficient of multiple correlation; 5) Cluster analysis: partitioning methods (k-means, k-medoids, normal model based clustering), hierarchical methods (agglomerative, divisive); 6) Linear discriminant analysis: derivation of linear discriminant rule from the Bayes classifier, estimation of the probability of misclassification; 7) Classification trees: recursive partitioning, optimal pruning; 8) Support vector machines: linearly separable and linearly non-separable case, nonlinear classification using support vector machines; 9) Artificial neural networks: introduction to the history and applications of neural networks, multilayer feed-forward neural network for classification.	
Recommended literature: 1) Izenman, A: Modern Multivariate Statistical Techniques, Springer 2008; 2) Everitt BS, Hothorn T: A Handbook of Statistical Analyses Using R, Chapman and Hall/CRC 2006; 3) Everitt BS: An R and S-plus Companion to Multivariate Analysis, Springer 2005; 4) Lamoš F,	

Potocký R: Pravdepodobnosť a matematická štatistika (štatistické analýzy), UK 1998; 5) Online materials of the lecturer.

Languages necessary to complete the course:
Slovak, English

Notes:
Further information can be found at http://www.iam.fmph.uniba.sk/ospm/Harman/teaching.htm

Past grade distribution
Total number of evaluated students: 448

A	B	C	D	E	FX
49,55	24,55	12,28	6,47	5,36	1,79

Lecturers: doc. Mgr. Radoslav Harman, PhD.

Last change: 11.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-122/15	Nonlinear Functional Analysis

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: II., III.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-122/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 12

A	ABS	B	C	D	E	FX	NEABS
83,33	0,0	0,0	0,0	0,0	0,0	16,67	0,0

Lecturers: prof. RNDr. Michal Fečkan, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-311/15	Nonlinear 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: 1.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KAMŠ/2-MAT-311/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
62,5	12,5	0,0	0,0	25,0	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:	**Course title:**
FMFI.KAG/2-MAT-624/09	Number Theory (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: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:
Students will learn to solve basic types of Diophantine equations. They will be able to use various types of densities to compare various subsets of the set of positive integers.

Class syllabus:
Various types of densities (Schnirelman, asymptotic and logarithmic density). Diophantine equations and Pythagorean triples. Results on expressing integers as sums of squares. Minkowski theorem. Cantor's expansions of real numbers. Proofs of rrationality of some real numbers.

Recommended literature:
Elementary number theory / Gareth A. Jones, J. Mary Jones. London : Springer, 1998

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 29

A	B	C	D	E	FX
93,1	3,45	0,0	0,0	0,0	3,45

Lecturers: RNDr. Martin Sleziak, PhD.

Last change: 31.10.2016

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-327/12	Numerical Modelling in Optimization Problems

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: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 17

A	B	C	D	E	FX
76,47	0,0	5,88	5,88	5,88	5,88

Lecturers: prof. RNDr. Jozef Kačur, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-112/15	Partial Differential Equations (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: 1.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-112/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 16

A	B	C	D	E	FX
31,25	12,5	31,25	12,5	12,5	0,0

Lecturers: doc. RNDr. Eugen Viszus, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-121/09	Partial Differential Equations (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: II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 30/70

Learning outcomes:

Class syllabus:
1. Spaces involving time.
2. Linear parabolic equations of the second order.
3. Linear hyperbolic equations of the second order.
4. Some methods of theory of nonlinear PDEs.

Recommended literature:
L.C. Evans, Partial Differential Equations, AMS, 1998.
F. John, Partial Differential Equations, Springer, 1982.
J. David Logan, Applied Partial Differential Equations, Springer, 2004.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 35

A	B	C	D	E	FX
34,29	22,86	11,43	14,29	17,14	0,0

Lecturers: prof. RNDr. Marek Fila, DrSc., doc. Mgr. Richard Kollár, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-606/09	Philosophical Questions of Mathematics Fundamentals

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: 1., 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Pavol Zlatoš, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-110/00	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: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Practicing of the students´ game skills in collective sports: basketball, volleyball, football, floorball and hockey. Mastering of the basic technique of a particular sport discipline in other sports. In paddling, basic training on still and slightly flowing water. Development of coordination skills, improvement of articular mobility and cardiovascular system.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1594

A	B	C	D	E	FX
98,56	0,56	0,06	0,0	0,0	0,82

Lecturers: PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-120/00	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: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Practicing of offensive and defensive game combinations and playing with modified rules in collective sports such as basketball, volleyball, football, floorball, hockey. Command of elements of higher difficulty in locomotion skills (swimming - crawl stroke, breast stroke, butterfly stroke, trampoline jumping and aerobics – practicing of areobics compositions, bodybuilding – development of the main muscle groups, paddling on running water. Testing of the level of physical fitness and coordination skills.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1458

A	B	C	D	E	FX
98,97	0,41	0,07	0,07	0,0	0,48

Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Branislav Nedbálek, PaedDr. Mikuláš Ortutay, Mgr. Ondrej Podkonický, Mgr. Júlia Raábová, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-210/00	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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
To improve offensive and defensive game combinations in collective sports. Practicing of tactical and technical elements in individual sports. Compensatory exercises to correct wrong body posture. Stretching. Competition rules in sport disciplines.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1219

A	B	C	D	E	FX
99,02	0,41	0,0	0,0	0,0	0,57

Lecturers: PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, Mgr. Ondrej Podkonický, Mgr. Jana Leginusová, Mgr. Tomáš Kuchár, PhD., PaedDr. Mikuláš Ortutay, Mgr. Martin Dovičák, PhD., Mgr. Júlia Raábová, PhD., Mgr. Branislav Nedbálek

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-220/00	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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Sport training for Faculty Championships in a selected sport with modified rules. Selection of sport-talented students into teams of the Faculty Sport League, University League of Bratislava Faculties, and participation in sport events of the Faculty and University.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1056

A	B	C	D	E	FX
99,05	0,38	0,09	0,0	0,09	0,38

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. Branislav Nedbálek, Mgr. Júlia Raábová, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-EFM-152/15	Principles of Mathematical Modelling in Science and Engineering

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 65

A	B	C	D	E	FX
49,23	21,54	10,77	6,15	3,08	9,23

Lecturers: doc. RNDr. Peter Guba, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTF/2-FTF-111/16	Representations of Groups

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 4 / 1 **per level/semester:** 56 / 14
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 12

A	B	C	D	E	FX
66,67	0,0	8,33	8,33	16,67	0,0

Lecturers: Mgr. Michal Širaň, PhD.

Last change: 04.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-161/00	Russian Language (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject provides a course in Russian language for beginners.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 685

A	B	C	D	E	FX
58,98	16,35	10,51	4,53	1,9	7,74

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-162/00	Russian Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The subject continues the program of Russian language (1) and provides a course of Russian for beginners.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 414

A	B	C	D	E	FX
65,94	15,22	8,7	3,86	0,97	5,31

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-261/00	Russian Language (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 197

A	B	C	D	E	FX
70,05	17,77	8,63	2,54	0,0	1,02

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-262/00	Russian Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
The textbook has not been published. It is at students' disposal in an electronic format.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 142

A	B	C	D	E	FX
75,35	13,38	7,04	2,82	0,7	0,7

Lecturers: PhDr. Elena Klátiková

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-619/09	Selected Chapters in the Theory of Functions of Complex Variable

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Recommended prerequisites:
1-MAT-416 or 1-FYZ-225 - introduction to methods of complex analysis.

Course requirements:
Scale of assessment (preliminary/final): 100/0

Learning outcomes:

Class syllabus:
Cauchy type integrals, principal value integral, Hilbert and Fourier transforms, analytic continuation, compactness for families of analytic functions, infinite series (Mittag-Leffler's theorem), infinite products (Weierstrass factorization), Gamma function, Stirling's formula, Riemann Zeta function, conformal maps, Riemann mapping theorem, elliptic functions, modular forms, Riemann surfaces and global analytic functions, branching points, Picard theorem, etc.
Covered topics could be customized to match students' interests.

Recommended literature:
M. Ablowitz, A. Fokas: Complex variables. Introduction and Applications, Cambridge Texts in Applied Mathematics, 2003
L. V. Ahlfors: Complex Analysis, McGraw-Hill, New York, 1979.
E. Stein, R. Shakarchi: Complex Analysis, Princeton University Press, 2003
A. I. Markushevich: Theory of functions of complex variable, Chelsea, New York, 1977

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 15

A	B	C	D	E	FX
80,0	13,33	0,0	6,67	0,0	0,0

Lecturers: Mgr. Martin Niepel, PhD.

Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-113/09	Selected Parts of Real Analysis

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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:
A. N. Kolmogorov, S. V. Fomin : Základy teorie funkcí a funkcionální analýzy. SNTL, Praha 1975.
J. Lukeš a kol.: Problémy z matematické analýzy. Skripta Univerzity Karlovy, Praha 1982.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 44

A	B	C	D	E	FX
75,0	13,64	4,55	6,82	0,0	0,0

Lecturers: doc. RNDr. Eugen Viszus, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-213/09	Selected Topics in Algebra (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: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 36

A	B	C	D	E	FX
47,22	13,89	16,67	5,56	13,89	2,78

Lecturers: doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-222/15	Selected Topics in Algebra (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: 2.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KAGDM/2-MAT-222/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
55,56	11,11	0,0	33,33	0,0	0,0

Lecturers: doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-231/09	Selected Topics in Cryptology

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: 4

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 40

A	B	C	D	E	FX
97,5	2,5	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Róbert Jajcay, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-MAT-326/12	Selected Topics in 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: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
43,48	21,74	17,39	8,7	0,0	8,7

Lecturers: 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:	**Course title:**
FMFI.KAG/2-MAT-626/19	Selected Topics of Algebraic Topology

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites: FMFI.KAG/2-MAT-223/09 - Algebraic Topology

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. Mgr. Tibor Macko, PhD.

Last change: 30.04.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-132/15	Selected Topics of Mathematical Physics

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: II.

Prerequisites:

Antirequisites: FMFI.KAMŠ+KMANM/2-MAT-132/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 6

A	B	C	D	E	FX
66,67	33,33	0,0	0,0	0,0	0,0

Lecturers: RNDr. Michal Demetrian, PhD., doc. RNDr. Eugen Viszus, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-313/19	Selected Topics of Numerical Algebra

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 34

A	B	C	D	E	FX
29,41	5,88	14,71	26,47	23,53	0,0

Lecturers: doc. RNDr. Andrej Ferko, PhD., Mgr. Martin Niepel, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-620/09	Seminar in Algebraic and Differential Topology (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: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Július Korbaš, CSc., Mgr. Martin Niepel, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-625/09	Seminar in Algebraic and Differential Topology (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: 3

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Július Korbaš, CSc., Mgr. Martin Niepel, PhD., doc. Mgr. Tibor Macko, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/2-MAT-602/09	Seminar in Graph Theory (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: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 7

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Martin Škoviera, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KI/2-MAT-611/09	Seminar in Graph Theory (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: 3

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 6

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Martin Škoviera, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-603/09	Seminar in Number Theory (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: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 16

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Martin Sleziak, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-612/09	Seminar in Number Theory (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: 3

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 13

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Martin Sleziak, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-307/11	Solutions of Tasks in Optimal Management and of Inversion Problems

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: 1.

Educational level: II.

Prerequisites:

Course requirements:
Scale of assessment (preliminary/final): 50/50

Learning outcomes:

Class syllabus:
Motivating models and formulation of optimal control; minimization methods, differentiation of functionals (differential Gatteaux), Lagrange identity and the adjoint system. Maximum principle of Pontriagin. Numerical approximation of optimal control problems. Solusion of the inverse problems by the method of optimal control. Regularization of ill-posed problems, Tichonoff's regularization. Approximation of optimal control problems by the methods of nonlinear programming . Solution of some models from engineering practice (determination of parameters in heat transfer problems, Stefanovej problem, transport and adsorption).

Recommended literature:
R. P. Fedorenko: Približennoe rešenie zadač optimalnovo upravlenia (rusky) Moskva "Nauka" Fyziko-matematičeskaja literatura 1978.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 26

A	B	C	D	E	FX
42,31	23,08	7,69	7,69	15,38	3,85

Lecturers: prof. RNDr. Jozef Kačur, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-332/09	Solving of Convection-Diffusion Problems

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:
Mathematical modelling, construction of variational formulation; existence and uniqueness of the variational solution; numerical approximation by the methods: „up wind“, „ method of characteristics“ operator splitting; convergence of apptroximations; solution of transport problem, diffusion and adsorption; transport of contaminant in porous media.

Recommended literature:
J.Kacur: Numericke metody riesenia PDE (skripta v elektronickej forme)
R.J.Le Veque: Numerical Methods for Conservation Law,Birkhauser,Basel 1992

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
47,37	15,79	5,26	21,05	10,53	0,0

Lecturers: prof. RNDr. Jaroslav Jaroš, CSc., prof. RNDr. Jozef Kačur, DrSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM+KAMŠ/2-MAT-341/15	Solving of Engineering Problems by Numerical Software

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: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-341/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
87,5	12,5	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Peter Guba, PhD., Mgr. Jela Babušíková, PhD.

Last change: 27.04.2017

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-115/17	Sports in Natur (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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 68

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:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-116/18	Sports in Natur (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: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 35

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:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAMŠ/2-PMS-123/10	Stochastic 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: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Evaluation: project, oral examination
Approximate grade thresholds: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 80/20

Learning outcomes:
Upon satisfactory completion of the course, students will know basic methods of computer generation of random numbers, general random variables, and random vectors. The students will be able to use the random variates generation for Monte-Carlo sampling, and for the evaluation of complex stochastic systems.

Class syllabus:
Generating realizations of random numbers, random variables and random vectors. Statistical analysis of simulation data. Basic Monte Carlo methods.

Recommended literature:
Ross S: Simulation, Elsevier Academic Press 2006
Fishman GS: Monte Carlo: Concepts, Algorithms and Applications, Springer 1996
Online materials of the lecturer

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 370

A	B	C	D	E	FX
41,89	23,51	15,14	9,19	6,49	3,78

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:	**Course title:**
FMFI.KMANM/2-MAT-142/14	Transport, conservation laws and equations of motion

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: 4

Recommended semester: 3.

Educational level: II.

Prerequisites: FMFI.KMANM/2-MAT-112/15 - Partial Differential Equations (1),FMFI.KAMŠ/2-MAT-121/09 - Partial Differential Equations (2)

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	10,0	10,0	10,0	0,0	0,0

Lecturers: prof. RNDr. Ján Filo, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MMN-140/15	Unconventional Application of Mathematical Analysis

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: 4.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KMANM/2-MAT-621/09

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 68

A	B	C	D	E	FX
91,18	8,82	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Jaroslav Jaroš, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-212/09	Universal Algebras and Lattices (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: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 32

A	B	C	D	E	FX
78,13	9,38	9,38	0,0	3,13	0,0

Lecturers: prof. RNDr. Tibor Katriňák, DrSc., doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-221/09	Universal Algebras and Lattices (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: 3

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 27

A	B	C	D	E	FX
85,19	14,81	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Tibor Katriňák, DrSc., doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-618/09	Universal Algebras and Lattices (3)

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: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 13

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Tibor Katriňák, DrSc., doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-MAT-623/09	Universal Algebras and Lattices (4)

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: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 6

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Tibor Katriňák, DrSc., doc. RNDr. Jaroslav Guričan, CSc.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KMANM/2-MAT-325/12	Variational Methods in Differential Equations

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: 4

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 22

A	B	C	D	E	FX
40,91	13,64	13,64	9,09	18,18	4,55

Lecturers: prof. RNDr. Jozef Kačur, DrSc., Dr. Hana Šmitala Mizerová

Last change: 30.04.2019

Approved by: