Course descriptions

TABLE OF CONTENTS

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-203/10	**Course title:** Active Participation in a Regular Research Seminar (1)

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

Number of credits: 10

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-204/10	**Course title:** Active Participation in a Regular Research Seminar (2)

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

Number of credits: 10

Recommended semester: 4.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-205/10	**Course title:** Active Participation in a Regular Research Seminar (3)

Educational activities: **Type of activities:** **Number of hours:**   **per week:**   **per level/semester:** **Form of the course:** on-site learning
Number of credits: 10
Recommended semester: 6.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-206/10	**Course title:** Active Participation in a Regular Research Seminar (4)

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

Number of credits: 10

Recommended semester: 8.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	

University: Comenius University Bratislava	

Faculty:	

Course ID: FMFI.KAMŠ/3-MAM-014/00	**Course title:** Asymptotic Methods

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

Number of credits: 10

Recommended semester: 6.

Educational level: III.

Prerequisites:

Course requirements:
Interim assessment during the semester has a weight of 30% (homeworks 20%, bonus exercises 10%). The two semester exam papers have a total weight of 70% (the first paper taken in the middle of the semester, the second paper taken at the end of the semester). The student must obtain at least half of the points from each semester exam paper. The final evaluation can be adjusted by an oral exam (theoretical questions, written preparation).
Grading: A (100-91), B (90-81), C (80-71), D (70-61), E (60-51), FX (50-0)
Scale of assessment (preliminary/final): 30/70

Learning outcomes:
To give an overview of basic asymptotic methods for solving algebraic and differential problems in applied mathematics.

Class syllabus:
Algebraic equations: Iterative method. Algebraic equations: Expansion method. Singular perturbations and rescaling. Logarithmic Poincare's expansions. Convergence and asymptoticity. Asymptotic approximation of integrals. Watson's lemma. The steepest descent method. Regular perturbation problems in differential equations. Singular perturbation problems in differential equations. Method of matched asymptotic expansions. Multiple scale method. WKBJ method. Poincare-Lindstedt method. Radius of convergence and Domb-Sykes plots.

Recommended literature:
E. J. Hinch: Perturbation Methods, Cambridge University Press, 1991
J. Kevorkian, J. D. Cole: Multiple Scale and Singular Perturbation Methods, Springer, 1996

Languages necessary to complete the course:
English

Notes:

Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers: doc. RNDr. Peter Guba, PhD.	
Last change: 22.06.2022	
Approved by:	

COURSE DESCRIPTION

Academic year: 2021/2022	

University: Comenius University Bratislava	

Faculty:	

Course ID: FMFI.KJP/3-MXX-101/15	**Course title:** Course of English for PhD Studies (1)

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

Number of credits: 5

Recommended semester: 1.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 166

A	ABS	B	C	D	E	FX	NEABS
50,6	43,98	0,6	0,0	0,0	2,41	0,0	2,41

Lecturers: PhDr. Alena Zemanová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	

University: Comenius University Bratislava	

Faculty:	

Course ID: FMFI.KJP/3-MXX-102/15	**Course title:** Course of English for PhD Studies (1)

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

Number of credits: 5

Recommended semester: 2.

Educational level: III.

Prerequisites: FMFI.KJP/3-MXX-101/15 - Course of English for PhD Studies (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 161

A	ABS	B	C	D	E	FX	NEABS
54,66	38,51	0,0	0,0	0,0	0,0	0,0	6,83

Lecturers: PhDr. Alena Zemanová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-709/10	**Course title:** Development of Novel Software Product Linked with PhD Project

Educational activities: **Type of activities:** **Number of hours:** **per week: per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

STATE EXAM DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	
Course ID: FMFI.KMANM/3-MNA-990/15	**Course title:** Dissertation Thesis Defense
Number of credits: 30	
Recommended semester: 7., 8..	
Educational level: III.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-005/15	**Course title:** Finite Element Methods

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

Number of credits: 10

Recommended semester: 5.

Educational level: III.

Prerequisites:

Antirequisites: FMFI.KMANM/3-MNA-005/00

Course requirements:
 Continuous assessment: individual work
 Exam: oral
 Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
 Scale of assessment (preliminary/final): 0/100

Learning outcomes:
 Acquire methods and practices for the implementation of modern computational procedures.

Class syllabus:
 Galerkin method, interpolation theory in H-spaces 1D and 2D. Finite element method error estimation. Bases in specific spaces. The first Strang's lemma, nonconformal elements, the second Strang's lemma, the Maltigrid method, algebraic solution, solution of evolutionary problems by the finite element method.

Recommended literature:
 Metóda konečných prvkov / Marián Slodička. Bratislava : Fakulta matematiky, fyziky a informatiky UK, 2001

Languages necessary to complete the course:
 Slovak, English

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

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

Last change: 16.03.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-703/10	**Course title:** Home Project Co-researcher

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

Number of credits: 5
Recommended semester: 6.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	
Course ID: FMFI.KMANM/3-MNA-101/10	**Course title:** Individual Study of Science and Research Resources (1)

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

Number of credits: 12
Recommended semester: 1.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-102/10	**Course title:** Individual Study of Science and Research Resources (2)

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

Number of credits: 13
Recommended semester: 2.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:

Past grade distribution
Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-103/10	**Course title:** Individual Study of Science and Research Resources (3)

Educational activities: **Type of activities:** **Number of hours:**   **per week: per level/semester:** **Form of the course:** on-site learning
Number of credits: 12
Recommended semester: 3.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:

Past grade distribution Total number of evaluated students: 0	
ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	

University: Comenius University Bratislava	

Faculty:	

Course ID: FMFI.KMANM/3- MNA-104/10	**Course title:** Individual Study of Science and Research Resources (4)

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

Number of credits: 13

Recommended semester: 4.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-105/10	**Course title:** Individual Study of Science and Research Resources (5)

Educational activities: **Type of activities:** **Number of hours:**   **per week:**   **per level/semester:** **Form of the course:** on-site learning
Number of credits: 12
Recommended semester: 5.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-106/10	**Course title:** Individual Study of Science and Research Resources (6)

Educational activities: **Type of activities:** **Number of hours:**   **per week: per level/semester:** **Form of the course:** on-site learning
Number of credits: 13
Recommended semester: 6.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-107/10	**Course title:** Individual Study of Science and Research Resources (7)

Educational activities: **Type of activities:** **Number of hours:**   **per week: per level/semester:** **Form of the course:** on-site learning
Number of credits: 12
Recommended semester: 7.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-108/10	**Course title:** Individual Study of Science and Research Resources (8)

Educational activities: **Type of activities:** **Number of hours:**   **per week:** **per level/semester:** **Form of the course:** on-site learning
Number of credits: 13
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	

University: Comenius University Bratislava

Faculty:

Course ID: FMFI.KMANM/3- MNA-702/10	**Course title:** International Project Co-researcher

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

Number of credits: 5

Recommended semester: 6.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-708/10	**Course title:** Introduction of Novel Experimental Method Linked with PhD Project

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

Number of credits: 5
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-004/00	**Course title:** Numerical Methods for Conservation Law

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

Number of credits: 10

Recommended semester: 4.

Educational level: III.

Prerequisites:

Course requirements:
 Continuous assessment: individual work
 Exam: oral
 Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Learning outcomes:
 To get acquainted with the basic methods of solving hyperbolic conservation systems.

Class syllabus:
 Hyperbolic systems; linear problems and their numerical methods; consistence, convergence and Lax's theorem, Lax Vendroffova method, nonlinear hyperbolic problems, weak and entropy solutions, conservative and entropy methods, Riemann problem and its solution, Godunov method, Roas method, nonlinear hyperbolic systems and the methods of their solutions.

Recommended literature:
 Le Veque: Numerical methods for conservative law, ETH Zurich, Birkhauser-Verlag, Basel, 1992

Languages necessary to complete the course:
 Slovak, English

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

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

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-002/00	**Course title:** Numerical Methods for Solving ODEs

Educational activities: **Type of activities:** lecture **Number of hours:**   **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning
Number of credits: 10
Recommended semester: 2.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus: IVP: one step methods, multistep methods, stability, convergence, nonstiff and stiff problems, explicit RK-methods of higher order, implicit RK-methods, delay differential equations. BVP:.conditioning of BVPs, initial value methods, finite difference methods, finite element methods, mesh selection, singular perturbations, functional differential equations, solving of nonlinear multipoint BVPs.
Recommended literature: Hairer, E., Norsett, S. P., Wanner, G.: Solving Ordinary Differential Equations I Nonstiff Problems.Springer Verlag 1987 Hairer, E.,Wanner, G.: Solving Ordinary Differential Equations II Stiff and Differential – Algebraic Problems. Springer Verlag 1991 Ascher, U. M., Mattheij, R. M. M., Russell, R. D.: Numerical Solution of Boundary Value Problems for Ordinary Differential Equations. SIAM 1995 Dávid, A., Chocholatý, P.: Numerická matematika II (Okrajové úlohy pre obyčajné diferenciálne rovnice) UK Bratislava 1985
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: Dr. Hana Šmitala Mizerová

Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-001/00	**Course title:** Numerical Methods of Linear Algebra

Educational activities: **Type of activities:** lecture **Number of hours:**   **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning
Number of credits: 10
Recommended semester: 1.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus: Direct solution's methods for systems of linear algebraic equations and their stability. Projective methods. Classical iterative methods for sparse systems and special modifications to accelerate their convergence. Methods of solution for eigenvalue problem and generalized eigenvalue problem. Last square problem.
Recommended literature: G.H.Golub, C. F. Mc. Loan: Matrix Computations, North Oxford Academic,Oxford 1983, 1988, The John Hopkins University Press, Baltimore and London, 1996 Y. Saad: Iterative Methods for Sparse Linear Systems, SIAM, Pfiladelphia,2003
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	
Course ID: FMFI.KMANM/3- MNA-701/10	**Course title:** Obtaining a University Grant
Educational activities: **Type of activities:** **Number of hours:** **per week:** **per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 6.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

STATE EXAM DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	
Course ID: FMFI.KMANM/3-MNA-950/15	**Course title:** Passing Dissertation Examination
Number of credits: 20	
Recommended semester: 3., 4..	
Educational level: III.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-401/10	**Course title:** Presentation at a Science Event (1)

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

Number of credits: 15
Recommended semester: 2.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-402/10	**Course title:** Presentation at a Science Event (2)

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

Number of credits: 15
Recommended semester: 4.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-403/10	**Course title:** Presentation at a Science Event (3)

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

Number of credits: 15
Recommended semester: 6.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-404/10	**Course title:** Presentation at a Science Event (4)

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

Number of credits: 15
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:

Past grade distribution
 Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-704/10	**Course title:** Quotation Registered in SCI or SCOPUS

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

Number of credits: 5
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-707/10	**Course title:** Quotation in a Home Scientific Journal

Educational activities: **Type of activities:** **Number of hours:**   **per week: per level/semester:** **Form of the course:** on-site learning
Number of credits: 5
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-705/10	**Course title:** Quotation in a Monograph

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

Number of credits: 5
Recommended semester: 8.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-706/10	**Course title:** Quotation in a Scientific Journal Abroad

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

Number of credits: 5

Recommended semester: 8.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-301/10	**Course title:** Reviewed Journal (1)

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

Number of credits: 25

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-302/10	**Course title:** Reviewed Journal (2)

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

Number of credits: 25
Recommended semester: 4.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-303/10	**Course title:** Reviewed Journal (3)

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

Number of credits: 25

Recommended semester: 6.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-304/10	**Course title:** Reviewed Journal (4)

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

Number of credits: 25

Recommended semester: 8.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-801/15	**Course title:** Teaching Activities (1)

Educational activities:
Type of activities:
Number of hours:
per week: **per level/semester:**
Form of the course: on-site learning
Number of credits: 10
Recommended semester: 2.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution   Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-802/15	**Course title:** Teaching Activities (2)

Educational activities: 　**Type of activities:** 　**Number of hours:** 　　**per week:　per level/semester:** 　**Form of the course:** on-site learning
Number of credits: 10
Recommended semester: 4.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution 　Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-803/15	**Course title:** Teaching Activities (3)

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

Number of credits: 10
Recommended semester: 6.
Educational level: III.
Prerequisites:
Course requirements:
Learning outcomes:
Class syllabus:
Recommended literature:
Languages necessary to complete the course:
Notes:
Past grade distribution Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change: 02.06.2015
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3- MNA-804/15	**Course title:** Teaching Activities (4)

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

Number of credits: 10

Recommended semester: 8.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty:	

Course ID: FMFI.KMANM/3-MNA-003/00	**Course title:** Variational Methods of Solving of PDEs

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

Number of credits: 10

Recommended semester: 3.

Educational level: III.

Prerequisites:

Course requirements:
 Exam: oral
 Indicative rating scale: A 90%, B 80%, C 70%, D 60%, E 50%
 Scale of assessment (preliminary/final): 0/100

Learning outcomes:
 To gain theoretical basics of modern numerical methods.

Class syllabus:
 Sobolev spaces, generalized solutions of boundary value elliptic problems, Lax-Milgram theorem, Ritz and Galerkin methods, Fredholm alternative, spectral theory, generalized solutions of parabolic and hyperbolic problems.

Recommended literature:
 K. Rektorys: Variational Methods in Mathematics, Science and Engineering, SNTL, Praha 1974 (in Czech)
 J. Nečas: Les Methodes Discrete en Theorie des Equations Elliptiques, Academia, Praha 1967
 J. Wloka: Partial Differential Equations, University Press, Cambridge

Languages necessary to complete the course:

Notes:

Past grade distribution
 Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: prof. RNDr. Michal Fečkan, DrSc.

Last change: 12.03.2022

Approved by: