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Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-108/22 Activating Methods and Their Use in Learning **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 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: 4 C Α В D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD. Last change: 11.10.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KAn/N-XXXX-005/21 Bioarchaeology **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., 3. **Educational level:** I., II. **Prerequisites: Course requirements: Learning outcomes:** 

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 1110

A	В	С	D	Е	FX
75,23	11,17	5,95	2,79	0,81	4,05

Lecturers: doc. RNDr. Radoslav Beňuš, PhD., Mgr. Silvia Bodoriková, PhD., prof. Mgr. Viktor

Černý, Dr.

Last change: 07.11.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-074/22 CLIL 1 – Content and Language Integrated Learning **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 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: 14

A	В	С	D	Е	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Barbara Kordíková, PhD., Mgr. Karin Rózsová Wolfová

Last change: 26.09.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KJ/N-mXCJ-075/22

CLIL 2 – Content and Language Integrated Learning

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level: II.** 

**Prerequisites:** PriF.KJ/N-mXCJ-074/22 - CLIL 1 – Content and Language Integrated Learning

**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	В	С	D	Е	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Barbara Kordíková, PhD., Mgr. Karin Rózsová Wolfová

**Last change:** 21.06.2023

#### STATE EXAM DESCRIPTION

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KOrCh/N-mCOR-106/22 Chemistry of Polymers **Educational activities:** Type of activities: lecture **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester:** 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: 3 В  $\mathbf{C}$ A D E FX 0,0 100,0 0,0 0,0 0,0 0,0Lecturers: Mgr. Juraj Kronek, PhD., Mgr. Zuzana Benková, PhD. Last change: 14.06.2023 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID:** Course title: PriF.KJ/N-mXCJ-078/22 Deutsch für Naturwissenschaftler A1 (začiatočníci) **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester:** 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: 23

A	В	С	D	Е	FX
95,65	0,0	0,0	0,0	0,0	4,35

Lecturers: Mgr. Karin Rózsová Wolfová

Last change: 24.07.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID:** Course title: PriF.KJ/N-mXCJ-080/22 Deutsch für Naturwissenschaftler A2 (začiatočníci) **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 2. Educational level: 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 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: Mgr. Karin Rózsová Wolfová

Strana: 10

Last change: 24.07.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-079/22 Deutsch für Naturwissenschaftler B1 (pokročilí) **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester:** 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: 15 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: Mgr. Karin Rózsová Wolfová Last change: 24.07.2022

Strana: 11

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-081/22 Deutsch für Naturwissenschaftler B2 (pokročilí) **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 2. Educational level: 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: 5 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: Mgr. Karin Rózsová Wolfová Last change: 24.07.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUCH-103/22 Didactics of Chemistry 1 **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning Number of credits: 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: 26 Α В  $\mathbf{C}$ D E FX 73,08 23,08 0,0 0,0 0,0 3,85 Lecturers: prof. RNDr. Miroslav Prokša, CSc., Mgr. Lenka Šikulíncová, PhD.

Strana: 13

Last change: 09.08.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUCH-104/22 Didactics of Chemistry 2 **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning Number of credits: 4 **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 Α В  $\mathbf{C}$ D E FX 46,15 46,15 0,0 0,0 7,69 0,0Lecturers: prof. RNDr. Miroslav Prokša, CSc., PaedDr. Anna Drozdíková, PhD. Last change: 09.08.2022

Strana: 14

#### STATE EXAM DESCRIPTION

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-951/15 | Didactics of Mathematics

Number of credits: 3

**Educational level:** II.

#### **Learning outcomes:**

The graduate will be ready to perform the tasks assigned to a beginning math teacher.

#### Class syllabus:

State final examination in the scope of master's study of mathematics didactics. The student should be able to include the task in the thematic unit, identify preconceptions and the necessary knowledge to solve it, determine the skills that the student will learn on it, respectively. concepts that allows you to discover. The student will demonstrate a model solution, point out problematic places in the solution with which students could have problems and how he would react to them as a teacher. After completing the task, the student should outline the activities that would follow and how he would close the lesson.

### State exam syllabus:

#### 1. Logic and sets

Logic (propositions, operations with propositions, logical conjunctions and quantifiers), sets (number of elements of unification of two and three sets, De Morgan's formulas for complement of unification and intersection), proofs and conclusions (direct and indirect proofs, proofs by dispute, mathematical induction, mode ponens, modus tollens).

2. Numbers, variables, numerical fields

Binomial theorem and Pascal's triangle, derivation of formulas  $a^n-b^n$  (including geometric interpretation for n = 2 and n = 3).

3. Number theory

Number of prime numbers, relation of largest common divisor and smallest common multiple of two numbers, prime decomposition number of number divisors, irrationality of the square root of a prime number, derivation of divisibility criteria 4, 5, 10, 100, 3, 6, 9.

4. Equations, inequalities and their system

Geometric interpretation of a system of two linear equations with two unknowns, conditions for the existence of solutions, equivalent and non-equivalent modifications and their relation to basic functions.

5. Function and its properties

Basic transformations of function graphs, definitions of basic properties of functions (domain of definition, domain of values, increasing and decreasing, extrema and local extrema - sharp and fuzzy, examples), inverse function and its graph.

6. Linear and quadratic function

Significance of coefficients k and q in the formula of the linear function y = kx + q, geometric meaning of the directive, quadratic function (derivation of the relation for calculating roots, coordinates of the vertex of the parabola.

7. Arithmetic and geometric sequence, infinite (geometric) series

Basic relationship management.

#### 8. Polynomials, power functions and linear polynomials

Root factors and their relation to the roots of a polynomial equation, square roots as inverse functions to power functions, definition of a rational power of a positive number, linear polynomial function (derivation of asymptote equations and conditions why ad  $\neq$  bc).

#### 9. Exponential and logarithmic functions

Exponential functions (definition of power for natural, integer and rational exponent, basic properties of exponential function and their justification, simple and compound interest, regular deposits and withdrawals, loan repayments), definition of logarithm, rules for calculating logarithms and their connection with creation of exponential function, relationships between logarithms with different bases.

#### 10. Trigonometric functions

Definition of trigonometric functions in a right triangle and using a unit circle and their mutual relation, values of trigonometric functions for basic angles, accounting formulas, formulas for double and half angle, relations for sum and difference of trigonometric functions.

#### 11. Triangle

Consistency and similarity of triangles, Pythagorean and Euclidean theorems, different relations for the content of a triangle (Heron's formula, using sinus of angle, radius of inscribed and described circle), derivation of statements about intersections of angles, axes of sides, lines, heights, sine and cosine theorem.

#### 12. Parallelograms and trapezoid

Derivation of formulas for the content of parallelograms and trapezoids, derivation of some of their properties the diagonals of a quadrilateral with sides a, b, c, d are perpendicular to each other just when a2 + c2 = b2 + d2).

#### 13. Circle

Formula for the content of a circle and a paragraph, size in degrees and radians, center and circumferential angle, Tales' theorem, estimation of the number  $\pi$  using written and described ngons, related to trigonometric functions.

#### 14. Analytical geometry in the plane and in space

Vectors and operations with them, scalar product and its relation to the angle of two vectors, analytical expression of a line and a plane, various equations of a line, derivation of coordinates of the center of a line and a dividing line in a given ratio, center of a triangle, size of a line, derivation of a formula lines and from the plane, angle of two lines (using scalar product, using directives), angle of line and plane, normal vector.

#### 15. Sets of points of given properties and their analytical expression

Derivation of "basic" sets of points of a given property (including a set of points from which a line can be seen at a given angle).

#### 16. Conic sections

Definitions of conic sections (circle, ellipse, hyperbola and parabola) as sets of points of given properties and derivation of their equations.

#### 17. Suitable and similar representations, construction tasks

Examples of design tasks solved by a combination of calculation and construction, the use of sets of points of given properties in design tasks, examples of design tasks solved using identical and similar representations.

#### 18. Basic ways of displaying space in a plane

Basic properties of parallel projection, hint of their justification, linear perspective and its basic properties, layers and their basic properties.

#### 19. Linear formations in space - positional problems

Use of basic statements about the intersections of a pair of parallel ones planes with another plane when constructing sections of bodies by a plane.

#### 20. Solids

Cavalieri's principle and its application e.g. to calculate the volume of a sphere, a formula for calculating the volume of pyramids and cones, the idea of justifying the formula for the surface of a sphere.

#### 21. Combinatorics

Combinatorial identities, basic combinatorial rules (sum, product), typical examples of their use, derivation of formulas for the number of variations, combinations, permutations (also with repetition), combinatorial derivation of basic relations in the Pascal triangle (symmetry, sum of minor elements).

#### 22. Probability

Statistical and Laplace definition of probability, dependent and independent events, calculation of probability for independent events, geometric probability and an example of its use.

#### 23. Statistics

Statistical set and position measures (modus, median, mean), basic properties of the arithmetic mean (sum of deviations from the mean is equal to 0), various possibilities of describing the "scatter" of the set, Chebyshev's inequality.

#### Languages necessary to complete the course:

slovak, english

Last change: 17.03.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

FMFI.KDMFI/2-UMA-104/22

Didactics of Mathematics (1)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 4

Recommended semester: 1.

Educational level: II., N

**Prerequisites:** 

#### **Course requirements:**

Continuous assessment: group homework, reading of scientific articles, discussion of articles and the specified topic, group work on a lesson plan described for each group in the assignment.

The student must obtain at least 50% of the continuous assessment and each assignment must be evaluated with a non-zero number of points.

Final evaluation: oral exam, individual preparation of a lesson plan and its presentation

Indicative assessment scale: A 94%, B 86%, C 79%, D 70%, E 60%, Fx <60%

Scale of assessment (preliminary/final): 60/40

#### **Learning outcomes:**

The student will gain an overview of didactic theories, will be able to critically evaluate them and use the appropriate methods and forms. Through activities at the seminar, they will acquire modern teaching techniques that are a prevention of formal knowledge and misconceptions in mathematics. The study of scientific and research articles and the subsequent discussion or authentic experience will give graduates a better insight into the issues of inclusive school, creating preparations for the lesson (or sequence) and asking "good questions".

#### Class syllabus:

The language of mathematics, its historical development and didactic significance. A parallel between phylogeny and ontogeny of mathematical thinking. Conceptual and cognitive process in mathematics. Principles, means and forms of teaching in mathematics. Objectives of the teaching process in mathematics. Learning theories. Lesson preparation and its starting points. Resources and their use in preparation, during teaching in evaluation. Hypothetical learning trajectories.

#### **Recommended literature:**

Dítě, škola a matematika: Konstruktivistické přístupy k vyučování / Milan Hejný, František

Kuřina. Praha: Portál, 2001

Moderní vyučování / George Petty Praha: Portál, 1993

Dvacet pět kapitol z didaktiky matematiky / Milan Hejný, Jarmila Novotná, Naďa Stehlíková

(Eds.) Praha, 2004

Komunikácia v inkluzívnej škole / Marta Horňáková. Bratislava: Univerzita Komenského v Bratislave. 2017

Elementary and Middle School Mathematics: Teaching Developmentally. / John A. Van de Walle, Karen Karp, Jennifer M. Bay-Williams. Pearson.

Theory of didactical situations in mathematics /Guy Brousseau. Springer, 1997

Textbook explanations: Modes of reasoning in 7th grade Israeli mathematics textbooks. / Silverman B, and Even R., CERME 9. Charles University in Prague. Faculty of Education. 2015, pp.205-212

Od obsahu vzdělávání k žákově znalosti: Kritická místa na cestě do školy a ze školy / T. Janik, Arnica 8, 2018, 1–8. Západočeská univerzita v Plzni, Plzeň.

Refining teacher design capacity: Mathematics teachers' interactions with digital curriculum resources / Birgit Pepin, Ghislaine Gueudet, Luc Trouche. In. ZDM Mathematics Education, 2017, 49, 799–812 https://doi.org/10.1007/s11858-017-0870-8

Own electronic materials published via the subject's website (eg course in LMS Moodle)

## Languages necessary to complete the course:

slovak, englihs

#### **Notes:**

#### Past grade distribution

Total number of evaluated students: 178

A	В	С	D	Е	FX
93,82	3,93	0,56	0,56	0,0	1,12

Lecturers: doc. PaedDr. Mária Slavíčková, PhD.

Last change: 15.06.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-105/22 | Didactics of Mathematics (2)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 4 per level/semester: 56 Form of the course: on-site learning

Number of credits: 4

**Recommended semester: 2.** 

Educational level: II., N

#### **Prerequisites:**

#### **Course requirements:**

Continuous assessment: individual preparation of a lesson plan and its placement in the thematic plan, microteaching, preparation of written tests (2 equal groups), peer assessment, didactic analysis of teaching texts, reading and discussion of scientific articles.

The student must obtain at least 50% of the continuous assessment and each assignment must be evaluated with a non-zero number of points.

Exam: written with oral consultation

Indicative assessment scale: A 94%, B 86%, C 79%, D 70%, E 60%, Fx <60%

Scale of assessment (preliminary/final): 60/40

#### **Learning outcomes:**

The graduate of the course is acquainted with the goals of mathematics education at lower secondary school, with adequate teaching methods, forms and means, with ways of introducing selected mathematical concepts, is ready for his work in school and out of school, can transfer to pedagogical practice knowledge and skills acquired in individual professional disciplines. The study of scientific and research articles with a subsequent discussion or an authentic experience will give graduates a better insight into the cognitive and affective components of mathematics teaching at lower secondary school.

#### Class syllabus:

Specifics of teaching mathematics for individual topics and concepts of mathematics at lower secondary school: educational goals, activities, the assumption of the development of student understanding in the context of educational activities and the creation of a hypothetical trajectory. Selection of adequate methods, forms and age-appropriate activities for teaching mathematics at the second stage of primary school. Integration of digital technologies into the teaching of mathematics also in order to support argumentation, reasoning, and building a mathematical culture (correctness of concepts, procedures, arguments, etc.).

#### **Recommended literature:**

Dítě, škola a matematika: Konstruktivistické přístupy k vyučování / Milan Hejný, František

Kuřina. Praha: Portál, 2001

Moderní vyučování / Geoffrey Petty. Praha: Portál, 1993

Is this a coincidence? The role of examples in fostering a need for proof / Buchbinder,

O., Zaslavsky, O., ZDM Mathematics Education 43, 269 (2011). https://doi.org/10.1007/s11858-011-0324-7

Elementary and Middle School Mathematics: Teaching Developmentally. / John A. Van de Walle, Karen Karp, Jennifer M. Bay-Williams. Pearson. 2012

Strategies for Teaching Fractions: Using Error Analysis for Intervention and Assessment / David B. Spangler.

Dvacet pět kapitol z didaktiky matematiky / Milan Hejný, Jarmila Novotná, Naďa Stehlíková (Eds.) Praha, 2004

Dostupné učebnice Matematiky pre 5. – 9. ročník ZŠ a nižšie ročníky osemročných gymnázií / Ján Žabka, Pavol Černek / Ondrej Šedivý a kol. / Soňa Čeretková a kol. / Milan Hejný a kol. Nový Pomocník z matematiky (5. – 9. ročník) / Iveta Kohanová a kol.

Own electronic materials published via the subject's website (eg course in LMS Moodle)

## Languages necessary to complete the course:

slovak, enghlish

#### **Notes:**

#### Past grade distribution

Total number of evaluated students: 170

A	В	С	D	Е	FX
65,88	18,24	11,18	3,53	0,59	0,59

Lecturers: doc. PaedDr. Mária Slavíčková, PhD., PaedDr. Peter Vankúš, PhD.

Last change: 17.06.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-106/22 | Didactics of Mathematics (3)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 4 per level/semester: 56 Form of the course: on-site learning

Number of credits: 4

**Recommended semester: 3.** 

Educational level: II., N

#### **Prerequisites:**

#### **Course requirements:**

Continuous assessment: individual preparation of a lesson plan and its placement in the thematic plan, microteaching, preparation of written tests (2 equal groups), peer assessment, didactic analysis of teaching texts, reading and discussion of scientific articles.

The student must obtain at least 50% of the continuous assessment and each assignment must be evaluated with a non-zero number of points.

Exam: written with oral consultation

Indicative assessment scale: A 94%, B 86%, C 79%, D 70%, E 60%, Fx <60%

Scale of assessment (preliminary/final): 60/40

#### **Learning outcomes:**

The graduate of the course is acquainted with the goals of mathematics education at upper secondary schools, with adequate teaching methods, forms and means, with ways of introducing selected mathematical concepts, is ready for his work at school and outside school, can transfer to pedagogical practice knowledge and skills acquired in individual professional disciplines. Specially, the graduate of the course will gain an overview of didactic procedures for teaching mathematics suitable for the transition from lower to upper secondary school and in the first years of upper secondary school.

#### Class syllabus:

Specifics of the last year of lower secondary school, transition to the 1st year of upper secondary school. Appropriate activities of teaching mathematics for individual topics of the first and second year of upper secondary school: educational goals, activities, the assumption of the development of student understanding in the context of educational activities and the creation of their hypothetical scenario. Selection of adequate methods, forms and cognitively appropriate activities. Integration of digital technologies into the teaching of mathematics also in order to support argumentation, reasoning, and building a mathematical culture (correctness of concepts, procedures, arguments, etc.).

#### **Recommended literature:**

Dítě, škola a matematika: Konstruktivistické přístupy k vyučování / Milan Hejný, František Kuřina. Praha : Portál, 2001

Moderní vyučování / Geoffrey Petty Praha: Portál, 1993

Dvacet pět kapitol z didaktiky matematiky / Milan Hejný, Jarmila Novotná, Naďa Stehnlíková (Eds.) Praha, 2004

Thinking mathematically / John Mason, Leone Burton, Kaye Stacey. Pearson, 2010

Explanation and Proof in Mathematics. Philosophical and Educational Perspectives / G. Hanna, H. N. Jahnke, H. Pulte (Eds.), Springer 2010

Matematika a svet okolo nás : Zbierka úloh / Zbyněk Kubáček ... [et al.]. Bratislava : Pavol Cibulka. 2008

Učebnice matematiky pre gymnáziá / Zbyněk Kubáček

Matematika : 1 : zbierka úloh pre stredné školy / Iveta Kohanová ... [et al.]. Bratislava : Orbis Pictus Istropolitana, 2011

Own electronic materials published via the subject's website (eg course in LMS Moodle)

#### Languages necessary to complete the course:

#### **Notes:**

#### Past grade distribution

Total number of evaluated students: 150

A	В	С	D	Е	FX
70,0	18,67	8,67	2,67	0,0	0,0

Lecturers: doc. PaedDr. Mária Slavíčková, PhD., Mgr. Michaela Vargová, PhD.

Last change: 15.06.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-107/22 | Didactics of Mathematics (4)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 4

Recommended semester: 4.

**Educational level: II.** 

#### **Prerequisites:**

#### **Course requirements:**

Continuous assessment: individual preparation of a lesson plan and its placement in the thematic plan, microteaching, preparation of written tests (2 equal groups), peer assessment, didactic analysis of teaching texts, reading and discussion of scientific articles.

The student must obtain at least 50% of the continuous assessment and each assignment must be evaluated with a non-zero number of points.

Exam: written with oral consultation

Indicative assessment scale: A 94%, B 86%, C 79%, D 70%, E 60%, Fx <60%

Scale of assessment (preliminary/final): 60/40

#### **Learning outcomes:**

The graduate of the course will gain an overview of didactic procedures in the teaching of mathematics at upper secondary school and in the preparation of students for the school-leaving examination in mathematics, in extracurricular activities. The described activities of the educational process are focused on the creative use of knowledge from mathematics acquired during the study.

#### Class syllabus:

Selected activities for teaching mathematics on the topics of the third and fourth year of high school (for graduates and non-graduates): educational goals, activities, the assumption of the development of student understanding in the context of educational activities and the creation of hypothetical trajectories.

#### **Recommended literature:**

Učebnice matematiky pre gymnáziá / Zbyněk Kubáček

Matematika : 1 : zbierka úloh pre stredné školy / Iveta Kohanová ... [et al.]. Bratislava : Orbis Pictus Istropolitana, 2011

Seminár z matematiky, časti 1 – 3 / Zbyněk Kubáček, Ján Žabka

Explanation and Proof in Mathematics. Philosophical and Educational Perspectives / G. Hanna,

H. N. Jahnke, H. Pulte (Eds.), Springer 2010

Thinking mathematically / John Mason, Leone Burton, Kaye Stacey. Pearson, 2010

Maturitné testy z matematiky /nucem.sk

Own electronic materials published via the subject's website (eg course in LMS Moodle)						
Languages neo slovak, english	essary to comple	ete the course:				
Notes:						
Past grade dist Total number of	tribution of evaluated stude	nts: 33				
A	В	С	D	Е	FX	
100,0	0,0	0,0	0,0	0,0	0,0	
Lecturers: doc	. PaedDr. Mária S	Slavíčková, PhD.	, Mgr. Michaela	Vargová, PhD.		
Last change: 1	7.06.2022					
Approved by:						

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** FMFI.KMANM/2-Didactics of Mathematics in Praxis (1) UMA-259/22 **Educational activities:** Type of activities: seminar **Number of hours:** per week: 3 per level/semester: 42 Form of the course: on-site learning Number of credits: 2 Recommended semester: 3. Educational level: II **Prerequisites:** 

#### **Course requirements:**

Ongoing evaluation: homeworks

Indicative rating scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

#### **Learning outcomes:**

Students will be prepared for the situations they will experience in the reality of teaching mathematics at the second primary education stage. They will know various teaching techniques, methods of interpretation, working with the textbook as well as supplementary materials, various forms of written and oral examinations, as well as methods of correcting children's solutions. They will learn to distinguish which statements help students and which harms them.

#### Class syllabus:

Demonstrations of a transmissive and constructivist way of leading a lesson. Error preview. Textbook as a teacher's aid. Textbook as a student aid. (Topics will be documented in the curriculum of the second primary education stage).

#### **Recommended literature:**

Aj geometria naučila človeka myslieť / Milan Hejný. Bratislava : Slovenské pedagogické nakladateľstvo. 1990

Analýza řešení slovních úloh : Kapitoly z didaktiky matematiky. / Jarmila Novotná.. Praha : Univerzita Karlova, 2000.

Dítě, škola a matematika : Konstruktivistické přístupy k vyučování / Milan Hejný, František Kuřina. Praha: Portál, 2001

Teória vyučovania matematiky 2 / Milan Hejný ... [et al.]. Bratislava : Slovenské pedagogické nakladateľstvo, 1990

#### Languages necessary to complete the course:

Slovak, English

**Notes:** 

Past grade dist	Past grade distribution							
Total number of evaluated students: 95								
A	В	С	D	Е	FX			
100,0	0,0	0,0	0,0	0,0	0,0			

Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., Mgr. Lucia Šimová, Mgr. Jana Trúsiková, PhD.

**Last change:** 15.03.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

FMFI.KMANM/2- Didactics of Mathematics in Praxis (2)

**Course title:** 

UMA-260/15

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

**Educational level:** II.

#### **Prerequisites:**

#### **Course requirements:**

Ongoing evaluation: homeworks

Indicative rating scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

#### Learning outcomes:

Students will be prepared for the situations they will experience in the school reality of teaching mathematics in secondary school. They will know various teaching techniques, methods of interpretation, working with the textbook as well as supplementary materials, various forms of written and oral examinations, as well as methods of correcting children's solutions. They will learn to distinguish which statements help students and which harms them.

#### Class syllabus:

Evaluation and classification. Preparations, analysis and corrections of written works and tests (topics will be documented in the secondary school curriculum).

#### **Recommended literature:**

Aj geometria naučila človeka myslieť / Milan Hejný. Bratislava : Slovenské pedagogické nakladateľstvo, 1990

Dítě, škola a matematika : Konstruktivistické přístupy k vyučování / Milan Hejný, František Kuřina. Praha : Portál, 2001

Stavba planimetrie / Ján Gatial, Milan Hejný. Bratislava : Slovenské pedagogické nakladateľstvo, 1973

Teória vyučovania matematiky 2 / Milan Hejný ... [et al.]. Bratislava : Slovenské pedagogické nakladateľstvo. 1990

Analýza řešení slovních úloh : Kapitoly z didaktiky matematiky. / Jarmila Novotná.. Praha : Univerzita Karlova, 2000.

#### Languages necessary to complete the course:

Slovak, English

Notes:  Past grade distribution  Total number of evaluated students: 78							

Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., Mgr. Lucia Šimová, Mgr. Jana Trúsiková, PhD.

**Last change:** 15.03.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUCH-105/22 Didactics of School Experiments in Chemistry 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: **Recommended literature:** Languages necessary to complete the course: **Notes:** Past grade distribution Total number of evaluated students: 26 Α В  $\mathbf{C}$ D E FX 3,85 57,69 15,38 15,38 3,85 3,85 Lecturers: PaedDr. Anna Drozdíková, PhD. Last change: 09.08.2022

Strana: 30

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KDPP/N-mUCH-106/22

Didactics of School Experiments in Chemistry 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: PriF.KDPP/N-mUCH-105/22 - Didactics of School Experiments in Chemistry 1

**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	В	С	D	Е	FX
7,69	38,46	30,77	23,08	0,0	0,0

Lecturers: PaedDr. Anna Drozdíková, PhD.

Last change: 09.08.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUCH-107/22 Digital Technologies in Chemistry Education **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 2. Educational level: 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 В Α  $\mathbf{C}$ D E FX 69,23 30,77 0,0 0,0 0,0 0,0Lecturers: Mgr. Lenka Šikulíncová, PhD. Last change: 22.08.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KJ/N-mXCJ-076/22

EAP 1/English for Academic Purposes

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester:** 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: 173

A	В	С	D	Е	FX
87,28	10,4	1,16	0,0	0,0	1,16

**Lecturers:** PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová, Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., RNDr. Tatiana Slováková, PhD.

Last change: 26.09.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KJ/N-mXCJ-077/22 EAP 2/English for Academic Purposes

**Educational activities: Type of activities:** seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level:** 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: 139

A	В	С	D	Е	FX
89,21	7,91	0,72	0,72	0,0	1,44

**Lecturers:** PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová, Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., RNDr. Tatiana Slováková, PhD.

Last change: 26.09.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-106/22 Education to Marriage and Parenthood **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 2. Educational level: 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: 25 Α В  $\mathbf{C}$ D E FX 96,0 0,0 0,0 0,0 0,0 4,0 Lecturers: RNDr. Soňa Nagyová, PhD. Last change: 22.08.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KOrCh/N-mUCH-098/22 **Everyday Life Chemistry Educational activities:** Type of activities: lecture **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 3. Educational level: 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: 10 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. Ing. Mária Mečiarová, PhD., Mgr. Henrieta Stankovičová, PhD. Last change: 13.09.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KGe/N-XXXX-004/21

Genetics for everyone

**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., 4.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 1090

A	В	С	D	Е	FX
92,84	0,92	0,0	0,0	0,0	6,24

**Lecturers:** RNDr. Regina Sepšiová, PhD., doc. Mgr. Miroslava Slaninová, Dr., Mgr. Filip Červenák, PhD., prof. RNDr. Andrea Ševčovičová, PhD., doc. RNDr. Eliška Gálová, PhD., Mgr. Stanislav Kyzek, PhD.

Last change: 15.05.2021

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KRGRR/N- Geography of the World in the 21.st century

XXXX-001/21

**Educational activities:** 

Type of activities: lecture / seminar

**Number of hours:** 

per week: 1 / 1 per level/semester: 14 / 14

Form of the course: on-site learning

**Number of credits: 3** 

Recommended semester: 2., 4.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 88

A	В	C	D	Е	FX
81,82	4,55	5,68	1,14	1,14	5,68

Lecturers: Mgr. Rastislav Cákoci, PhD., RNDr. Katarína Danielová, PhD., doc. RNDr. Daniel Gurňák, PhD., doc. RNDr. František Križan, PhD., doc. RNDr. Eva Rajčáková, CSc., Mgr. Michala Sládeková Madajová, PhD., RNDr. Angelika Švecová, PhD., Mgr. Martin Šveda, PhD., prof. RNDr. Ladislav Tolmáči, PhD., RNDr. Mgr. Anna Tolmáči, PhD., Mgr. Gabriel Zubriczký, PhD.

**Last change:** 15.05.2021

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KGP/N-mUXX-132/22

Geology for Natural Scientists

**Educational activities:** 

**Type of activities:** lecture / seminar

**Number of hours:** 

per week: 1 / 1 per level/semester: 14 / 14

Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level: 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: 3

A	В	С	D	Е	FX
100,0	0,0	0,0	0,0	0,0	0,0

**Lecturers:** prof. Mgr. Natália Hlavatá Hudáčková, PhD., doc. Mgr. Peter Uhlík, PhD., prof. RNDr. Martin Bednarik, PhD., doc. RNDr. Ľubomír Jurkovič, PhD.

Last change: 06.09.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KGP/N-XXXX-007/21

Geology in Nutshell

**Educational activities:** 

Type of activities: practicals / lecture

**Number of hours:** 

per week: 1/2 per level/semester: 14/28

Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2., 4.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 44

A	В	С	D	Е	FX
86,36	0,0	0,0	0,0	11,36	2,27

**Lecturers:** prof. RNDr. Roman Aubrecht, Dr., prof. Mgr. Natália Hlavatá Hudáčková, PhD., doc. RNDr. Jozef Hók, CSc., prof. RNDr. Michal Kováč, DrSc., RNDr. Alexander Lačný, PhD., doc. RNDr. Jana Fridrichová, PhD., RNDr. Ondrej Nemec, PhD.

Last change: 20.01.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KPl/N-XXXX-009/21

Global Environmental Issues

**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., 4.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 555

A	В	С	D	Е	FX
90,27	0,0	0,54	0,0	0,0	9,19

Lecturers: doc. RNDr. Katarína Pavličková, CSc., prof. RNDr. Pavel Dlapa, PhD., RNDr. Martina Zvaríková, PhD., doc. RNDr. Ľubomír Jurkovič, PhD.

Last change: 09.11.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KOrCh/N-mUCH-101/22 **Green Chemistry Educational activities:** Type of activities: lecture **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 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: 11 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. Ing. Mária Mečiarová, PhD. Last change: 13.09.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KEM/N-mXXX-003/22

Green University 1

**Educational activities:** 

**Type of activities:** practicals / seminar

**Number of hours:** 

per week: 2 / 2 per level/semester: 28 / 28

Form of the course: on-site learning

Number of credits: 2

**Recommended semester:** 1., 2.., 3., 4.., 5., 6..

**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: 25

A	В	С	D	Е	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., Mgr. Martin Šebesta, PhD.,

RNDr. Hubert Žarnovičan, PhD.

Last change: 24.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KEM/N-mXXX-004/22

Green University 2

**Educational activities:** 

**Type of activities:** practicals / seminar

**Number of hours:** 

per week: 2 / 2 per level/semester: 28 / 28

Form of the course: on-site learning

Number of credits: 2

**Recommended semester:** 1., 2., 3., 4., 5., 6..

**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: 10

A	В	С	D	Е	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., Mgr. Martin Šebesta, PhD., RNDr. Hubert Žarnovičan, PhD.

Last change: 24.08.2022

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KOrCh/N-mUCH-099/22 **Industrial Chemistry for Teachers Educational activities:** Type of activities: lecture **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 3. Educational level: 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 Α В  $\mathbf{C}$ D E FX 39,13 17,39 30,43 0,0 8,7 4,35 Lecturers: RNDr. Jana Chrappová, PhD., Mgr. Tibor Peňaška, PhD. Last change: 10.07.2023 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KAG/2-UMA-164/22 Introduction to Graph Theory

**Educational activities:** 

Type of activities: course

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level: II.** 

**Prerequisites:** 

**Antirequisites:** FMFI.KAG+KI/2-UMA-164/15

**Course requirements:** 

Peliminary evaluation: homeworks

Exam: oral

Indicative evaluation scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

# **Learning outcomes:**

Students will get acquainted with basic concepts of graph theory. At the same time, they will learn to transform different types of problems into graph theory problems and solve them algorithmically.

# Class syllabus:

Some basic concepts and results from graph theory, searching graphs reachability and connectivity, trees and spanning trees, planar graphs, hard problems in graph theory.

# **Recommended literature:**

Grafové algoritmy / Ján Plesník. Bratislava : Veda, 1983 Grafy a jejich aplikace / Jiří Demel, Academia, 2002 Konec záhady hlavolamů / Stanislav Vejmola, SPN 1989

# Languages necessary to complete the course:

slovak,english

# **Notes:**

# Past grade distribution

Total number of evaluated students: 3

A	В	С	D	Е	FX
66,67	0,0	0,0	33,33	0,0	0,0

Lecturers: doc. RNDr. Martin Mačaj, PhD.

Last change: 14.03.2022

Approved by:	
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Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KPl/N-XXXX-008/21

Man as a part of the nature

**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:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 954

A	В	С	D	Е	FX
90,04	0,1	0,0	0,0	0,1	9,75

Lecturers: RNDr. Martina Zvaríková, PhD., prof. RNDr. Pavel Dlapa, PhD., RNDr. Malvína Reiffers Čierniková, PhD., prof. RNDr. Elena Masarovičová, DrSc., prof. PaedDr. Pavol Prokop, DrSc., prof. RNDr. Peter Fedor, DrSc., prof. Ing. Eva Chmielewská, CSc., RNDr. Martin Labuda, PhD., doc. RNDr. Eva Pauditšová, PhD., RNDr. Hubert Žarnovičan, PhD., doc. RNDr. Stanislav Rapant, DrSc., doc. RNDr. Ľubomír Jurkovič, PhD., doc. Mgr. Tomáš Lánczos, PhD., doc. RNDr. Katarína Pavličková, CSc.

Last change: 09.11.2022

# STATE EXAM DESCRIPTION

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KDPP/N-mUXX-102/22

Master's Thesis Seminar

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

**Number of credits: 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: 86

A	ABS	В	С	D	Е	FX
54,65	0,0	20,93	15,12	1,16	5,81	2,33

Lecturers: prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. Štefan Karolčík, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. PaedDr. Elena Čipková, PhD., RNDr. Soňa Nagyová, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Anna Drozdíková, PhD., Mgr. Lenka Šikulíncová, PhD., prof. RNDr. Ladislav Tolmáči, PhD., doc. Mgr. Marcel Horňák, PhD., RNDr. Ivan Ružek, PhD., doc. RNDr. František Križan, PhD., RNDr. Katarína Danielová, PhD., Mgr. Marta Nevřelová, PhD., PhDr. ThLic. Peter Ikhardt, PhD., Mgr. Štefan Zolcer, PhD., RNDr. Jana Ciceková, PhD., doc. RNDr. Eliška Gálová, PhD., prof. RNDr. Andrea Ševčovičová, PhD., RNDr. Jana Chrappová, PhD., doc. RNDr. Jozef Tatiersky, PhD., doc. Ing. Mária Mečiarová, PhD.

**Last change:** 14.09.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KDPP/N-mUXX-128/22

Master's Thesis Seminar 1

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 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: 40

A	В	С	D	Е	FX
77,5	10,0	7,5	2,5	2,5	0,0

Lecturers: doc. RNDr. Štefan Karolčík, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. PaedDr. Elena Čipková, PhD., RNDr. Soňa Nagyová, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Anna Drozdíková, PhD., Mgr. Lenka Šikulíncová, PhD., prof. RNDr. Ladislav Tolmáči, PhD., doc. Mgr. Marcel Horňák, PhD., RNDr. Ivan Ružek, PhD., doc. RNDr. František Križan, PhD., RNDr. Katarína Danielová, PhD., Mgr. Marta Nevřelová, PhD., PhDr. ThLic. Peter Ikhardt, PhD., Mgr. Štefan Zolcer, PhD., RNDr. Jana Ciceková, PhD., doc. RNDr. Eliška Gálová, PhD., prof. RNDr. Andrea Ševčovičová, PhD., RNDr. Jana Chrappová, PhD., doc. RNDr. Jozef Tatiersky, PhD., doc. Ing. Mária Mečiarová, PhD.

Last change: 22.08.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KDPP/N-mUXX-129/22

Master's Thesis Seminar 2

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 4 per level/semester: 56 Form of the course: on-site learning

Number of credits: 4

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: 79

A	В	С	D	Е	FX
65,82	18,99	6,33	5,06	3,8	0,0

Lecturers: doc. RNDr. Štefan Karolčík, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. PaedDr. Elena Čipková, PhD., RNDr. Soňa Nagyová, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Anna Drozdíková, PhD., Mgr. Lenka Šikulíncová, PhD., prof. RNDr. Ladislav Tolmáči, PhD., doc. Mgr. Marcel Horňák, PhD., RNDr. Ivan Ružek, PhD., doc. RNDr. František Križan, PhD., RNDr. Katarína Danielová, PhD., Mgr. Marta Nevřelová, PhD., PhDr. ThLic. Peter Ikhardt, PhD., Mgr. Štefan Zolcer, PhD., RNDr. Jana Ciceková, PhD., doc. RNDr. Eliška Gálová, PhD., prof. RNDr. Andrea Ševčovičová, PhD., RNDr. Jana Chrappová, PhD., doc. RNDr. Jozef Tatiersky, PhD., doc. Ing. Mária Mečiarová, PhD.

Last change: 22.08.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-218/11 | Mathematical Background of Music

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level:** II.

# **Prerequisites:**

# **Course requirements:**

Continuous assessment: individual work of students, project

Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

# **Learning outcomes:**

By completing the course, the student will deepen and combine knowledge of basic mathematics courses in bachelor's studies in the study program mathematics teacher preparation in combination, build on knowledge of mathematics didactics and broaden horizons in the context of creating lessons using interdisciplinary relationships.

# Class syllabus:

Selected parts of music theory from the point of view of mathematics, connection to mathematics from lower secondary school to university, related to the teaching of mathematics, preparation of interdisciplinary projects and activities for direct inclusion in teaching and leisure activities.

# **Recommended literature:**

Mathematics and Art / Bruter (Ed.), Springer

Hudba ako zdroj námetov vo vyučovaní matematiky / M. Slavíčková, In. Matematika, informatika, fyzika. Roč. 21, č. 38 (2012), s. 3-8. ISSN 1335-7794

Chladniho obrazce / E. Dubajová, (časť diplomovej práce), dostupné na https://wilma.sk/dokumenty/ef0ed9b0f05bd757ddcf91b96794b0cf/show

The Science of Sound / T. D. Rossing, R. F. Moore, P. A. Wheeler, 3. vyd., Pearson, 2014 Music: A Mathematical Offering / D. Benson, Department of Mathematics, Meston Building, University of Aberdeen, UK. 2008

# Languages necessary to complete the course:

slovak, english

#### Notes:

To complete the course, it is recommended to have at least a basic knowledge of music theory (min. of 2 years music school)

Past grade distribution Total number of evaluated students: 17							
A B C D E							
100,0	0,0	0,0	0,0	0,0	0,0		
Lecturers: doc.	PaedDr. Mária S	slavíčková, PhD.					
Last change: 17.03.2022							
Approved by:				_			

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-127/22 Means of Motivation in Teaching Chemistry **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning Number of credits: 4 **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: 11 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: prof. RNDr. Miroslav Prokša, CSc. Last change: 22.08.2022

Strana: 55

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

FMFI.KDMFI/2-UMA-257/15 Methods for Solving Mathematical Tasks (1)

**Educational activities: Type of activities:** seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: II.

# **Prerequisites:**

# **Course requirements:**

Continuous assessment: Homework - individual work of students Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

# **Learning outcomes:**

After completing the course, students will master methods of solving various mathematical tasks from the curriculum of lower and upper secondary school and will be able to apply these methods in the teaching of mathematics.

# Class syllabus:

Generally about solving mathematical tasks, basic methods of solving mathematical tasks -patterns identification and conclusion making, figural approaches to solving, formulating equivalent problems, modifying the problem, choosing effective marking, using symmetry, dividing the problem into several special cases, reverse procedure, indirect procedure, use of parity, mathematical induction, Dirichlet (Pigeon) principle.

# **Recommended literature:**

Metódy riešenia matematických problémov / L. C. Larson; from the American original translated by Jaroslav Smítal. Bratislava: Alfa, 1990

Metódy riešenia matematických úloh / Tomáš Hecht, Zita Sklenáriková. Bratislava : Slovenské pedagogické nakladateľstvo, 1992

Tasks from Mathematical Olympiad and Mathematical correspondence seminars

# Languages necessary to complete the course:

Slovak, English

**Notes:** 

Past grade distribution Total number of evaluated students: 153							
A B C D E F							
87,58 5,88 1,31 0,0 0,65 4,58							
Lecturers: Paed	Lecturers: PaedDr. Peter Vankúš, PhD., Mgr. Emília Miťková, PhD.						

**Last change:** 17.03.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-258/15 | Methods for Solving Mathematical Tasks (2)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level:** II.

# **Prerequisites:**

# **Course requirements:**

Continuous assessment: Homework - individual work of students Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

# **Learning outcomes:**

After completing the course, students will master methods of solving various mathematical tasks from the curriculum of lower and upper secondary school and will be able to apply these methods in the teaching of mathematics.

# Class syllabus:

Equations, inequalities, systems of equations and inequalities, sets of points of given properties, analytical geometry, construction tasks, planimetric tasks, stereometric tasks, inequalities in geometry, number theory, diophantic equations, combinatorial geometry, sequences, recurrent relationships, trigonometry and complex numbers, probability.

# **Recommended literature:**

Metódy riešenia matematických problémov / L. C. Larson ; from the American original translated by Jaroslav Smítal. Bratislava : Alfa, 1990

Metódy riešenia matematických úloh / Tomáš Hecht, Zita Sklenáriková. Bratislava : Slovenské pedagogické nakladateľstvo, 1992

Tasks from Mathematical Olympiad and Mathematical correspondence seminars

# Languages necessary to complete the course:

Slovak, English

# **Notes:**

# Past grade distribution

Total number of evaluated students: 88

A	В	С	D	Е	FX
93,18	3,41	1,14	0,0	0,0	2,27

Lecturers: Mgr. Emília Mit'ková, PhD., PaedDr. Peter Vankúš, PhD.

Last change: 17.03.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KAlCh/N-mUCH-112/22

Methods of Chemical Analysis in School Experiments

**Educational activities:** 

**Type of activities:** practicals / seminar

**Number of hours:** 

per week: 2 / 1 per level/semester: 28 / 14

Form of the course: on-site learning

**Number of credits: 3** 

**Recommended semester:** 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: 0

A	В	С	D	Е	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Radoslav Halko, PhD., RNDr. Simona Procházková, PhD.

Last change: 30.09.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-109/22 Mobile Science Learning 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: **Recommended literature:** Languages necessary to complete the course: **Notes:** Past grade distribution Total number of evaluated students: 0 C Α В D E FX 0,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs Last change: 21.06.2023 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-110/22 Mobile Science Learning 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: **Recommended literature:** Languages necessary to complete the course: **Notes:** Past grade distribution Total number of evaluated students: 1 C Α В D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs Last change: 21.06.2023 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-131/22 New Concepts of Teaching **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 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  $\mathbf{C}$ Α В D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: doc. RNDr. PaedDr. Zuzana Haláková, PhD. Last change: 22.08.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-124/22 Pedagogical Assessment **Educational activities:** Type of activities: lecture **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 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: 57 Α В  $\mathbf{C}$ D E FX 22,81 52,63 15,79 1,75 5,26 1,75 Lecturers: PhDr. ThLic. Peter Ikhardt, PhD. Last change: 27.09.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KDPP/N-mUXX-125/22

Pedagogical Research Methodology

**Educational activities:** 

Type of activities: lecture / seminar

**Number of hours:** 

per week: 2 / 2 per level/semester: 28 / 28

Form of the course: on-site learning

Number of credits: 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: 82

A	В	С	D	Е	FX
24,39	23,17	23,17	14,63	10,98	3,66

Lecturers: prof. RNDr. Miroslav Prokša, CSc., PaedDr. Anna Drozdíková, PhD.

Last change: 09.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KJCh/N-XXXX-011/21

Perspectives in Chemistry

**Educational activities:** 

Type of activities: lecture

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester:** 1., 3.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 36

A	В	С	D	Е	FX
27,78	41,67	13,89	2,78	0,0	13,89

**Lecturers:** RNDr. Marek Cigáň, PhD., doc. RNDr. Martin Putala, CSc., prof. Ing. Dušan Velič, DrSc., prof. RNDr. Ivan Černušák, DrSc., doc. RNDr. Erik Rakovský, PhD., Mgr. Peter Hrobárik, PhD., doc. RNDr. Oľga Rosskopfová, PhD.

Last change: 07.11.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KBCh/N-XXXX-010/22

Perspectives of Biochemistry

**Educational activities:** 

Type of activities: lecture

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2., 4.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 96

A	В	С	D	Е	FX
93,75	0,0	0,0	0,0	0,0	6,25

Lecturers: doc. RNDr. Marek Mentel, PhD., Mgr. Filip Brázdovič, PhD., Mgr. Andrea Cillingová, PhD., prof. RNDr. Anton Horváth, CSc., Mgr. Stanislav Huszár, PhD., Mgr. Petra Chovančíková, PhD., prof. RNDr. Marta Kollárová, DrSc., doc. RNDr. Jana Korduláková, PhD., prof. RNDr. Katarína Mikušová, DrSc., Ing. Martina Neboháčová, PhD., doc. Mgr. Peter Polčic, PhD., RNDr. Ingrid Sveráková, PhD., doc. RNDr. Igor Zeman, PhD., Mgr. Júlia Zemanová, PhD.

Last change: 19.09.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

PriF.KDPP/N-mUXX-126/22 | Philosophical Aspects of Education

**Course title:** 

**Educational activities:** 

Type of activities: lecture

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

# Type, volume, methods and workload of the student - additional information

Educational activities: Type of activities: lecture

Number of hours:

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 3.** 

**Educational level: II.** 

# **Prerequisites:**

# **Course requirements:**

Course requirements:

During the teaching period of the semester: participation, activity, elaboration of assignments or final test. The test or assignments will be from the material covered during the semester. The student can get a maximum of 50 points, the minimum for successful completion of the course is 30 points. Classification scale: A: 100-92%, B: 91-84%; C: 83-76%, D: 75-68%, E: 67-60% FX: 0-59% Violation of academic ethics results in the cancellation of the obtained points in the relevant evaluation item. The teacher accepts max. 2 absences with proven documents.

Interim / final evaluation weight: 100% in the examination period

# **Learning outcomes:**

Learning outcomes:

Upon successful completion of the course, students will know:

A: in the field of knowledge:

- What is philosophy, its basic structure, goals and mission
- What issues do philosophy of education and philosophical anthropology address, what are their goals and mission?
- What is the significance of philosophy for solving problems of theory and practice of education B: in the field of skills:
- Orientation in basic philosophical problems, disciplines and concepts
- Ask questions and formulate answers regarding philosophical questions of education
- Think independently about philosophical issues of education

# Class syllabus:

Class syllabus:

- 1. The concept and structure of philosophy
- 2. Philosophical and pedagogical anthropology
- 3. Philosophical anthropology and axiology
- 4. Philosophy of education I.
- 5. Philosophy of education II.
- 6. Philosophy of culture and values
- 7. Ethical issues and perspectives of education

# **Recommended literature:**

ANZENBACHER, Arno: Úvod do filosofie. Praha: SPN, 1991. ISBN: 80-04-26038-1.

BREZINKA, Wolfgang: Filozofické základy výchovy. Praha: Zvon, 1996. ISBN: 80-7113-169-5 CORETH, Emerich: Co je člověk? Základy filosofické antropologie. Praha: Zvon, 1994. ISBN: 80-7113-098-2

POPKIN, Richard. H., STROLL, Avrum: Filozofie pro každého. Praha: Ivo Železný, 2000.

ISBN: 80-240-0257-4

PELCOVÁ, Naděžda: Filozofická a pedagogická antropologie. Praha: Karolinum, 2000. ISBN: 80-246-0076-5

Complementary literature and literature that is not in AK UK will be presented at the beginning and during the semester. Teachers' presentations and non-AK UK literature are available at MS Teams

# Languages necessary to complete the course:

Languages necessary to complete the course:

Slovak

# **Notes:**

# Past grade distribution

Total number of evaluated students: 87

A	В	С	D	Е	FX
63,22	17,24	14,94	2,3	1,15	1,15

Lecturers: Mgr. Štefan Zolcer, PhD.

Last change: 02.03.2023

Approved by:

Academic year: 2022/2023
University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:
PriF.KTV/N-mXTV-107/22 Physical Education

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:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 219

A	В	С	D	Е	FX
95,89	0,46	0,0	0,91	0,46	2,28

**Lecturers:** Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Széllová, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KTV/N-mXTV-110/22

Physical Education 10

**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:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 176

A	В	С	D	Е	FX
97,73	0,57	0,57	0,0	0,0	1,14

**Lecturers:** Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Széllová, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KTV/N-mXTV-108/22

Physical Education 8

**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:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 133

A	В	С	D	Е	FX
96,99	0,75	0,0	0,0	0,0	2,26

**Lecturers:** Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Széllová, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KTV/N-mXTV-109/22

Physical Education 9

**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:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 245

A	В	С	D	Е	FX
97,55	0,0	0,41	0,0	0,0	2,04

**Lecturers:** Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Széllová, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KBo/N-XXXX-003/21 Plants known and unknown

**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:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 839

A	В	С	D	Е	FX
63,77	24,43	6,2	0,0	2,38	3,22

Lecturers: Ing. Mgr. Eva Zahradníková, PhD., doc. Mgr. Katarína Mišíková, PhD., doc. RNDr.

Jana Ščevková, PhD.

Last change: 30.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KRGRR/N- Practical Geography for Natural Scientists

XXXX-002/21

**Educational activities:** 

Type of activities: lecture / seminar

**Number of hours:** 

per week: 1 / 1 per level/semester: 14 / 14

Form of the course: on-site learning

Number of credits: 3

**Recommended semester:** 1., 3.

**Educational level:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 58

A	В	С	D	Е	FX
84,48	0,0	0,0	0,0	0,0	15,52

Lecturers: Mgr. Rastislav Cákoci, PhD., RNDr. Katarína Danielová, PhD., doc. RNDr. Daniel Gurňák, PhD., doc. RNDr. František Križan, PhD., doc. RNDr. Eva Rajčáková, CSc., Mgr. Michala Sládeková Madajová, PhD., RNDr. Angelika Švecová, PhD., Mgr. Martin Šveda, PhD., prof. RNDr. Ladislav Tolmáči, PhD., RNDr. Mgr. Anna Tolmáči, PhD., Mgr. Gabriel Zubriczký, PhD.

**Last change:** 15.05.2021

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KIHG/N-XXXX-012/21

Practical Geology for Everyone

**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:** I., II.

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 185

A	В	С	D	Е	FX
77,3	7,57	4,32	3,24	1,08	6,49

Lecturers: doc. RNDr. Renáta Fľaková, PhD., doc. RNDr. Renáta Adamcová, PhD., prof. RNDr. Roman Pašteka, PhD., prof. RNDr. Martin Bednarik, PhD., doc. RNDr. Dávid Krčmář, PhD., doc. RNDr. Andrej Mojzeš, PhD., RNDr. Ivana Ondrejková, PhD., doc. Mgr. Vladimír Greif, PhD., Mgr. Rudolf Tornyai, PhD., RNDr. Tatiana Durmeková, PhD., Mgr. Martin Zatlakovič, PhD., doc. RNDr. Milan Seman, CSc.

Last change: 18.09.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-115/22 Prevention of Drug Addiction **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester:** 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: 60 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: RNDr. Soňa Nagyová, PhD. Last change: 20.06.2023 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-253/22 | Problematic Parts of Secondary School Mathematics

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 3.** 

Educational level: II.

**Prerequisites:** 

**Antirequisites:** FMFI.KDMFI/2-UMA-253/19

**Course requirements:** 

Continuous assessment: output in front of the board, seminar work

Indicative assessment scale: A 94%, B 86%, C 79%, D 70%, E 60%, Fx <60%

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

# **Learning outcomes:**

# Class syllabus:

The course will follow on from the compulsory course Didactics of Mathematics 2 and will deal in depth with specific adequate methods, forms and age-appropriate activities for teaching problematic units in mathematics at lower secondary school.

# **Recommended literature:**

Dostupné učebnice Matematiky pre 5. – 9. ročník ZŠ a nižšie ročníky osemročných gymnázií / Ján Žabka, Pavol Černek / Ondrej Šedivý a kol. / Soňa Čeretková a kol. / Milan Hejný a kol. Nový Pomocník z matematiky (5. – 9. ročník) / Iveta Kohanová a kol.

Dítě, škola a matematika: Konstruktivistické přístupy k vyučování / Milan Hejný, František

Kuřina. Praha: Portál, 2001

Matematické cítenie / Jo Boalerová. Bratislava: Tatran, 2016

Moderní vyučování / Geoffrey Petty. Praha: Portál, 1993

Dvacet pět kapitol z didaktiky matematiky / Milan Hejný, Jarmila Novotná, Naďa Stehlíková (Eds.) Praha. 2004

Own electronic materials published via the subject's website (eg course in LMS Moodle)

# Languages necessary to complete the course:

slovak, english

**Notes:** 

Past grade distribution Total number of evaluated students: 12								
A	В	С	D	Е	FX			
91,67	0,0	0,0	0,0	0,0	8,33			
Lecturers: Paed	dDr. Peter Vankú	š, PhD.						
Last change: 14.03.2022								
Approved by:								

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** Rhetoric for Teachers PriF.KDPP/N-mUXX-116/22 **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 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: 35 В C Α D E FX 40,0 20,0 25,71 14,29 0,0 0,0Lecturers: Mgr. Štefan Zolcer, PhD. Last change: 14.09.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KTV/N-mXTV-112/22 River rafting **Educational activities:** Type of activities: other **Number of hours:** per week: per level/semester: 3d Form of the course: on-site learning Number of credits: 1 Recommended semester: 2., 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: 21

A	В	С	D	Е	FX
90,48	0,0	0,0	0,0	0,0	9,52

Lecturers: PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID:** Course title: PriF.KAgCh/N-mUCH-111/22 **School Chemical Calculations Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester:** 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: 6 C Α В D Ε FX 16,67 16,67 16,67 16,67 16,67 16,67 Lecturers: doc. RNDr. Jozef Tatiersky, PhD. Last change: 04.10.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KAgCh/N-mUCH-112/22

Selected Chapters from Inorganic Chemistry

**Educational activities:** 

Type of activities: lecture / seminar

**Number of hours:** 

per week: 2 / 2 per level/semester: 28 / 28

Form of the course: on-site learning

Number of credits: 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: 30

A	В	С	D	Е	FX
10,0	13,33	33,33	23,33	6,67	13,33

Lecturers: doc. RNDr. Jozef Tatiersky, PhD., RNDr. Jana Chrappová, PhD.

Last change: 14.09.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KBCh/N-mUCH-001/22 Selected Chapters in Biochemistry **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning Number of credits: 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: 23

A	В	С	D	Е	FX
13,04	8,7	17,39	43,48	17,39	0,0

Lecturers: doc. RNDr. Jana Korduláková, PhD.

Last change: 27.07.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KAG/2-UMA-115/22 | Selected Parts of Algebra and Theoretical Arithmetic

**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: 3** 

**Recommended semester: 3.** 

**Educational level: II.** 

# **Prerequisites:**

# **Course requirements:**

Homework assignments

Grading: A 90%, B 80%, C 70%, D 60%, E 50%, Fx < 50 %

Scale of assessment (preliminary/final): Semester 100% (homework assignments)

# **Learning outcomes:**

Students will gain familiarity with axiomatic definitions and applications of some algebraic structures, such as groups and fields. They will be able to prove basic results about sets operations and to verify whether some commonly used sets are countable or uncountable.

# Class syllabus:

Selected topics from the following areas:

Introduction to set theory. Operation with sets, functions. Cardinality, inequality between cardinal numbers, operations with cardinal numbers and their properties. Cantor's theorem. Countable and uncountable sets, applications.

Basics of group theory. Symmetry groups, permutation groups, abstract notion of a group. Subgroups, cyclic groups. Cosets and Langrange's theorem. Homomorphisms, normal subgroups, quotient groups.

Rings and fields. Modular arithmetic, polynomial rings. Construction of Q from Z, C from R, Q(sqrt(p)) from z Q. Field extensions, finite fields, impossibility of some geometric constructions.

#### **Recommended literature:**

#### Languages necessary to complete the course:

#### Notes:

# Past grade distribution

Total number of evaluated students: 105

A	В	C	D	Е	FX
63,81	14,29	13,33	3,81	3,81	0,95

Lecturers: prof. RNDr. Pavol Zlatoš, PhD., RNDr. Martin Sleziak, PhD.

Last change: 18.06.2022	
Approved by:	

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KAG/2-UMA-207/22 | Selected Parts of Geometry

**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:**

### **Course requirements:**

Continuous assessment: homework (50%).

Final assessment: written exam (50%).

At least half of the points from the continuous assessment must be admitted to the exam.

Grading: A [100-90], B (90-80], C (80-70], D (70-60], E (60-50], Fx (50-0].

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

# **Learning outcomes:**

Course graduate:

- 1. Knows basic affine and metric properties of conic sections in the Euclidean plane and quadratic surfaces in the Euclidean three-dimensional space, using mainly the analytical method.
- 2. Is aware of the crucial role of polarity in the theory of quadratic forms. Is informed about quadrics in the Euclidean space of any dimension.
- 3. Is acquainted with synthetic constructions of real regular conic sections and practical applications and interpretations of their properties.

### Class syllabus:

- 1. Conics in the Euclidean plane: definition and representation; asymptotic vectors; regular, singular point; the center of the conic; polarity; tangents; principal vectors; axes and vertices of the conics; affine and metric classification of conics; focal points and directrices. Applications.
- 2. Fundamentals of the theory of quadratic surfaces in the Euclidean three-dimensional space: regular linear and non-linear quadratic surfaces; singular quadratic surfaces; quadratic surfaces such as cylindrical surfaces over the conic sections; quadratic surfaces obtained by affine transformation of a conic. Intersection points of a line (plane) with a quadratic surface.

# **Recommended literature:**

Geometria 1 : Pre študentov matematiky učiteľského štúdia na univerzitách a pedagogických fakultách / Milan Hejný, Valent Zaťko, Pavel Kršňák. Bratislava : Slovenské pedagogické nakladateľstvo, 1985

Analytická teorie kuželoseček a kvadrik / Josef Janyška, Anna Sekaninová. Brno : Masarykova univerzita. 2001

Analytická geometria kužeľosečiek / Leo Boček. Bratislava : Slovenské pedagogické nakladateľstvo, 1978

# Languages necessary to complete the course:

Slovak, English

**Notes:** 

# Past grade distribution

Total number of evaluated students: 151

A	В	С	D	Е	FX
23,18	17,88	27,15	14,57	8,61	8,61

Lecturers: doc. RNDr. Pavel Chalmovianský, PhD., RNDr. Martina Bátorová, PhD.

Last change: 04.07.2023

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

FMFI.KMANM/2- Selected Parts of Mathematical Analysis

**Course title:** 

UMA-111/22

**Educational activities:** 

Type of activities: course

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

**Educational level:** II.

# **Prerequisites:**

# **Course requirements:**

Continuous assessment: homework

Final assessment: paper

Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Scale of assessment (preliminary/final): 40/60

#### **Learning outcomes:**

Students will master the basic analytical methods of investigation and modeling, when the action is affected by two variables. They will be able to estimate the shape of the graph of the functions of two variables.

#### Class syllabus:

Examples of quantities whose change depends on several variables. Graphs of some typical functions of two variables. Space R ^ 2 and R ^ 3. Sequence convergence in R ^ 2. Limit and continuity of a function of two variables. Partial derivation. Extremes of a function of two variables.

#### **Recommended literature:**

Diferenciální počet / Vojtech Jarník. Praha: Academia, 1984

Zbierka úloh z vyššej matematiky : 3.časť / Jozef Eliaš, Ján Horváth, Juraj Kajan. Bratislava :

Slovenské vydavateľstvo technickej literatúry, 1967

# Languages necessary to complete the course:

# **Notes:**

# Past grade distribution

Total number of evaluated students: 150

A	В	С	D	Е	FX
48,67	18,67	14,0	11,33	7,33	0,0

Lecturers: doc. RNDr. Ivan Kupka, CSc., RNDr. Monika Dillingerová, PhD.

<b>Last change:</b> 14.03.2022	
Approved by:	

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KMANM/2- Selected Parts of Mathematical Analysis (2)

UMA-112/22

**Educational activities: Type of activities:** seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 3.** 

Educational level: II.

**Prerequisites:** 

**Antirequisites:** FMFI.KMANM/2-UMA-112/15

**Course requirements:** 

Continuous assessment: homework

Final evaluation: test

Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Scale of assessment (preliminary/final): 40/60

#### Learning outcomes:

Students will expand their knowledge of the function of two variables. Using the double integral, they will be able to calculate different areas, volumes, lengths of curves.

#### Class syllabus:

Areas of type [x, y] and [y, x] and a formula for integrating the function of two variables in these areas. Calculation of areas, volumes and lengths of curves.

#### **Recommended literature:**

Integrální počet / Vojtech Jarník. Praha: Československá akademie věd, 1976

Zbierka úloh z vyššej matematiky : 4.časť / Jozef Eliaš, Ján Horváth, Juraj Kajan, Robert Šulka.

Bratislava: Alfa, 1979

Matematika III, Zbierka riešených úloh z integrálneho počtu funkcie viac premenných a krivkových integrálov / Dillingerová M., Feťková J., Híc P., Tóthová M. Alfa : Bratislava 1990

# Languages necessary to complete the course:

slovak, english

#### Notes:

For successful completion, it is desirable to first complete the course Selected Parts of Mathematical Analysis.

Past grade distribution Total number of evaluated students: 0									
A B C D E FX									
0,0	0,0	0,0	0,0	0,0	0,0				
Lecturers: doc.	Lecturers: doc. RNDr. Ivan Kupka, CSc., RNDr. Monika Dillingerová, PhD.								
Last change: 17.03.2022									
Approved by:	Approved by:								

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KOrCh/N-mUCH-100/22 Selected Topics in Organic Chemistry **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning Number of credits: 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: 28

A	В	С	D	Е	FX
17,86	17,86	17,86	25,0	10,71	10,71

Lecturers: doc. Ing. Mária Mečiarová, PhD., Mgr. Henrieta Stankovičová, PhD.

Last change: 14.06.2023

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KFTCh/N-mUCH-056/22 | Selected Topics in Physical Chemistry

**Educational activities:** 

Type of activities: lecture / seminar

**Number of hours:** 

per week: 1 / 1 per level/semester: 14 / 14

Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level: 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	В	С	D	Е	FX
15,38	15,38	53,85	15,38	0,0	0,0

Lecturers: doc. Mgr. Michal Pitoňák, PhD., prof. RNDr. Vladimír Kellö, DrSc.

Last change: 31.07.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

FMFI.KDMFI/2-UMA-283/22 | Selected Topics in Teaching of Mathematics

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 2

**Recommended semester: 2.** 

**Educational level:** II.

**Prerequisites:** 

# **Course requirements:**

Continuous assessment: homework (30 points)

Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

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

# **Learning outcomes:**

After completing the course, the student knows the theories of various forms of teaching, some of which he has tried. He knows the root causes of the problems that students with a planar representation of space have - the question "Why don't students see it?". Can carry out various additional activities that develop students' mathematical competencies, e.g. competitions, games, fun afternoon.

#### Class syllabus:

Basic features and historical development of constructivist teaching. Piaget, Kohlberg, Vygotsky, Bachelard. Creation of teaching material. Group and cooperative teaching. Didactic game, its use and creation. Stereometry cubes with paper scissors and glue. Stereometry of a circle, folding "other" origami. Project teaching, project assignment (to whom, what, how, when, for what time). Problem teaching, design of own problem teaching. Outdoor school - from organization to implementation. Mathematical afternoon at school in nature, creation of a program "out". Mathematical competitions - various forms of competitions, difficulty assessment and task creation.

# **Recommended literature:**

Teória vyučovania matematiky 2 / Milan Hejný ... [et al.]. Bratislava : Slovenské pedagogické nakladateľstvo, 1990

Učebné materiály pre vyučovanie matematiky / výber zostavili a preložili Monika Dillingerová, Lilla Koreňová, Peter Vankúš. Bratislava : Knižničné a edičné centrum FMFI UK, 2009 Geometrické úlohy z matematickej olympiády ZŠ / Monika Dillingerová. Bratislava : Metodickopedagogické centrum, 2005

# Languages necessary to complete the course:

slovak, english

Notes:									
Past grade distribution Total number of evaluated students: 101									
A	В	С	D	Е	FX				
56,44	22,77	8,91	4,95	2,97	3,96				
Lecturers: Paed	dDr. Peter Vankú	š, PhD., RNDr. N	Monika Dillingero	ová, PhD.					
Last change: 15.06.2022									
Approved by:	Approved by:								

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

FMFI.KMANM+KAG/2-

UMA-211/22

Seminar in History of Mathematics (1)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 3 per level/semester: 42 Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

**Educational level: II., N** 

# **Prerequisites:**

# **Course requirements:**

Ongoing evaluation: presentation of the prepared lesson (20 points), preparation of the written exam for other participants (10 points), active participation in the evaluation of presentations and written exams of other participants (30 points).

Grading: A (56-60 points), B (51-55 points), C (46-50 points), D (41-45 points), E (36-40 points), Fx (0-35 points).

Weight of the ongoing / final assessment: 100/0 Scale of assessment (preliminary/final): 100/0

#### **Learning outcomes:**

Student will gain an overview of the various periods of development of mathematics in antiquity, including examples of problems solved in individual basic works.

#### Class syllabus:

Mathematics of ancient Egypt and Babylonia. Pre-Euclidean mathematics in ancient Greece. Euclid 's Elements.

#### **Recommended literature:**

Dějiny matematiky / Dirk J. Struik ; přeložili Jaroslav Folta, Luboš Nový. Praha : Orbis, 1963

Dějiny matematiky ve starověku / Arnošt Kolman. Praha : Academia, 1968

Dějiny matematiky ve středověku / Adolf P. Juškevič. Praha : Academia, 1977

Dejiny matematiky / Ján Čižmár. Bratislava : Perfekt, 2020

The history of mathematics / Roger L. Cooke. Hoboke, NJ: John Wiley, 2003 The history of mathematics / David M. Burton, New York: McGraw-Hill, 2011

# Languages necessary to complete the course:

Slovak, English

Notes:

Past grade dist	Past grade distribution										
Total number of evaluated students: 155											
A	В	С	D	Е	FX						
63,23	30,32	5,81	0,65	0,0	0,0						
T . 1	D) ID   71   11	7 1 / 7 1	C DNID D	1.71 · × P1.5	_						

Lecturers: doc. RNDr. Zbyněk Kubáček, CSc., prof. RNDr. Pavol Zlatoš, PhD.

**Last change:** 24.06.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

FMFI.KMANM/2-UMA-212/15 Seminar in History of Mathematics (2)

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

**Educational level: II., N** 

# **Prerequisites:**

# **Course requirements:**

Ongoing evaluation: presentation of the prepared lesson (20 points), preparation of the written exam for other participants (10 points), active participation in the evaluation of presentations and written exams of other participants (30 points).

Grading: A (56-60 points), B (51-55 points), C (46-50 points), D (41-45 points), E (36-40 points), Fx (0-35 points).

Weight of the ongoing / final assessment: 100/0 Scale of assessment (preliminary/final): 100/0

#### **Learning outcomes:**

The student will gain an overview of the various periods of mathematics development, including examples of problems solved in individual basic works.

# Class syllabus:

Students will choose from the following topics: Ptolemy. Apollonius. Chinese and Arabic mathematics. Fibonacci. Alcuin's problems. Cardano's Ars Magna. Pascal's Arithmetic Triangle. Huygens's De Ratiociniis in Ludo Aleae. Bernoulli's Ars Conjectandi. Cavalieri's Geometry of indivisibles. Euler's Introductio and Letters to a German Princess. Venn's Symbolic Logic.

# **Recommended literature:**

Matematika v proměnách věků III / Editori Jindřich Bečvář, Eduard Fuchs. Praha : Výzkumné centrum pro dějiny vědy, 2004

Dějiny matematiky / Dirk J. Struik ; přeložili Jaroslav Folta, Luboš Nový. Praha : Orbis, 1963

Dějiny matematiky ve starověku / Arnošt Kolman. Praha : Academia, 1968

Dějiny matematiky ve středověku / Adolf P. Juškevič. Praha : Academia, 1977

Dejiny matematiky / Ján Čižmár. Bratislava : Perfekt, 2020

The history of mathematics / Roger L. Cooke. Hoboke, NJ: John Wiley, 2003 The history of mathematics / David M. Burton, New York: McGraw-Hill, 2011

# Languages necessary to complete the course:

Slovak, English

Notes:										
Past grade distribution Total number of evaluated students: 150										
A	В	С	D	Е	FX					
90,0	9,33	0,0	0,67	0,0	0,0					
Lecturers: doc.	Lecturers: doc. RNDr. Zbyněk Kubáček, CSc.									
<b>Last change:</b> 24.06.2022										
Approved by:										

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUXX-130/22 Specific Learning Disorders in School Practice **Educational activities:** Type of activities: lecture / seminar **Number of hours:** per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 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 В Α  $\mathbf{C}$ D E FX 16,67 0,0 83,33 0,0 0,0 0,0Lecturers: RNDr. Jana Ciceková, PhD.

Strana: 101

Last change: 22.08.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KAgCh/N-mUCH-110/22 Subject Competitions in Education **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 **Recommended semester: 2. Educational level: 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: 10 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: RNDr. Jana Chrappová, PhD. Last change: 14.09.2022 Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KTV/N-mUXX-204/22

Summer Physical-Education Training

**Educational activities:** 

Type of activities: other

**Number of hours:** 

per week: per level/semester: 7d Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2., 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	В	С	D	Е	FX
66,67	0,0	0,0	0,0	0,0	33,33

Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by:

**Prerequisites:** 

**Course requirements:** 

**Learning outcomes:** 

Class syllabus:

**Recommended literature:** 

Languages necessary to complete the course:

**Notes:** 

Past grade distribution

Total number of evaluated students: 69

A	В	С	D	Е	FX
65,22	30,43	0,0	2,9	1,45	0,0

Lecturers: doc. RNDr. Štefan Karolčík, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs, RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD., PaedDr. Anna Drozdíková, PhD., Mgr. Lenka Šikulíncová, PhD.

**Last change:** 22.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

**Course title:** 

PriF.KDPP/N-mUXX-104/22

Teaching Practice 2 (B)

**Educational activities:** 

Type of activities: practice

**Number of hours:** 

per week: per level/semester: 10d 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: 81

A	ABS	В	С	D	Е	FX
59,26	0,0	29,63	8,64	1,23	1,23	0,0

Lecturers: doc. RNDr. Štefan Karolčík, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs, RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD., PaedDr. Anna Drozdíková, PhD., Mgr. Lenka Šikulíncová, PhD., M. A. Linda Steyne, PhD., Mgr. Monika Šajánková, PhD.

**Last change:** 22.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:

Course title:

PriF.KDPP/N-mUXX-113/22

Teaching Practice 3 (A)

**Educational activities:** 

Type of activities: practice

**Number of hours:** 

per week: per level/semester: 15d 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: 84

A	В	С	D	Е	FX
66,67	17,86	7,14	2,38	4,76	1,19

**Lecturers:** doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., prof. RNDr. Miroslav Prokša, CSc., PaedDr. Anna Drozdíková, PhD., RNDr. Hubert Žarnovičan, PhD., PhDr. Michael Fuchs, Mgr. Lenka Šikulíncová, PhD., Mgr. Michaela Vargová, PhD.

**Last change:** 14.09.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KDPP/N-mUXX-114/22 | Teaching Practice 3 (B)

**Educational activities:** 

Type of activities: practice

**Number of hours:** 

per week: per level/semester: 15d 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: 110

A	ABS	В	С	D	Е	FX
61,82	0,0	22,73	10,0	2,73	2,73	0,0

Lecturers: doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., prof. RNDr. Miroslav Prokša, CSc., PaedDr. Anna Drozdíková, PhD., RNDr. Hubert Žarnovičan, PhD., PhDr. Michael Fuchs, Mgr. Lenka Šikulíncová, PhD., M. A. Linda Steyne, PhD., Mgr. Monika Šajánková, PhD., Mgr. Michaela Vargová, PhD.

**Last change:** 22.08.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KDPP/N-mUCH-108/22 Technical and Law Aspects of School Chemical Experiments **Educational activities: Type of activities:** practicals / seminar **Number of hours:** per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning Number of credits: 3 **Recommended semester: 3. Educational level: 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 C A В D E FX 0,0 0,0 0,0 0,0 0,0 0,0Lecturers: PaedDr. Anna Drozdíková, PhD.

Strana: 108

Last change: 22.08.2022

Approved by:

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

**Course ID:** 

**Course title:** 

PriF.KDPP/N-mUXX-107/22

The Art of Presentation and Communication

**Educational activities:** 

Type of activities: seminar

**Number of hours:** 

per week: 2 per level/semester: 28 Form of the course: on-site learning

Number of credits: 2

**Recommended semester:** 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: 6

A	В	С	D	Е	FX
83,33	0,0	0,0	0,0	0,0	16,67

**Lecturers:** RNDr. Peter Likavský, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., RNDr. Soňa Nagyová, PhD.

Last change: 11.10.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KZ/N-XXXX-006/21 Theory of species **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 2., 4. **Educational level:** I., II. **Prerequisites: Course requirements: Learning outcomes:** Class syllabus: **Recommended literature:** Languages necessary to complete the course: **Notes:** Past grade distribution Total number of evaluated students: 179 В Α  $\mathbf{C}$ D E FX 63,69 13,41 3,91 1,12 0,56 17,32 Lecturers: doc. Mgr. Peter Vďačný, PhD. Last change: 07.11.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-084/22 UNIcert Deutsch 1 **Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 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: 4 C Α В D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: Mgr. Karin Rózsová Wolfová Last change: 24.07.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-085/22 UNIcert Deutsch 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: 1 C Α В D E FX 100,0 0,0 0,0 0,0 0,00,0Lecturers: Mgr. Karin Rózsová Wolfová Last change: 24.07.2022 Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-082/22 **UNIcert English 1 Educational activities:** Type of activities: seminar **Number of hours:** per week: 2 per level/semester: 28 Form of the course: on-site learning Number of credits: 2 Recommended semester: 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: 82

A	В	С	D	Е	FX
86,59	4,88	2,44	3,66	0,0	2,44

**Lecturers:** PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová, Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., RNDr. Tatiana Slováková, PhD.

**Last change:** 26.09.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** PriF.KJ/N-mXCJ-083/22 **UNIcert English 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: 73 Α В  $\mathbf{C}$ D E FX 100,0 0,0 0,0 0,0 0,0 0,0Lecturers: PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová, Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., RNDr. Tatiana Slováková, PhD.

Approved by:

Last change: 26.09.2022

Academic year: 2022/2023

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID: Course title:

PriF.KTV/N-mUXX-203/22 Winter Physical-Education Training

Educational activities:
Type of activities: other
Number of hours:

per week: per level/semester: 7d Form of the course: on-site learning

Number of credits: 2

**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: 45

A	В	С	D	Е	FX
84,44	0,0	0,0	0,0	0,0	15,56

**Lecturers:** Mgr. Martin Mokošák, PhD., PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková

Last change: 01.08.2022

Approved by:

Academic year: 2022/2023 University: Comenius University Bratislava Faculty: Faculty of Natural Sciences **Course ID: Course title:** Ďumbier mountain hiking PriF.KTV/N-mXTV-111/22 **Educational activities:** Type of activities: other **Number of hours:** per week: per level/semester: 3d Form of the course: on-site learning Number of credits: 1 **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: 71

A	В	С	D	Е	FX
81,69	0,0	0,0	0,0	0,0	18,31

**Lecturers:** PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Strečanská

Last change: 01.08.2022

Approved by: