Course descriptions

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COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-256/15	Assessment of the Science Education Results

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: D, II.

Prerequisites:

Course requirements:
Continuous assessment: discussions (3x20 marks), presentation of the results of individual work (40 marks)
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
Credits will not be awarded if student scores less than 50%.

Learning outcomes:
The graduate will know the basic principles for creating goals of physics and science education for formal education and also the relationship between formal and non-formal education. They will know the basic ways of evaluating the results of physics and science education.

Class syllabus:
Objectives of education, Taxonomy of objectives. Educational methods and methods of measuring educational results at the class and school level. Nationwide testing. High stakes testing. International measurements in science education.

Recommended literature:

Languages necessary to complete the course:
Slovenský a anglický.

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
86,96	8,7	0,0	0,0	0,0	4,35

Lecturers: PaedDr. Lukáš Bartošovič, PhD.

Last change: 18.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAFZM/2-UFY-220/00	Astronomy and Meteorology

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 26 / 13
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: tests (2x30 marks), discussions (4x10 marks).
Indicative assessment: A: 100-90%, B: 90-80%, C: 80-70%, D: 70-60%, E: 60-50%.
Credits will not be awarded if a student scores less than 50%.
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will know the basic concepts in astronomy, the origin and development of individual cosmic bodies and structures, an explanation of the physical nature of atmospheric processes and processes taking place in the air, which create weather and climate, acquaintance with methods of forecasting synoptic situations and weather conditions.

Class syllabus:
History of astronomy, spherical astronomy (coordinate systems, stellar aberration, parallax, refraction), Solar system (Sun, planets, dwarf planets, comets, asteroids, meteors), origin and evolution of stars (Jeans critical mass, H-R diagram, nucleogenesis of elements, final evolution stages of stars), galactic astronomy, cosmology. Subject of meteorology, basic conceptions, role and organization of meteorological service. Basic meteorological elements and instrumentation of meteorological station. State equation, principal statics equation, barometric formula. Condensation and sublimation of water vapour. Adiabatic and pseudoadiabatic phenomenons. Thermal stratification. General circulation. Air masses. Atmospheric fronts. Pressure systems. Weather predictions. Human influence on climate.

Recommended literature:
Vanýsek V. 1980, Základy astronómie a astrofyziky, Academia Praha
Beatty J. K., Petersen C. C., Chaikin A. eds.: 1999, The New Solar System, Sky Publ. Corp. and Cambridge Univ. Press
Netopil, R. a kol.: Fysická geografie 1. SPN, Praha, 1984, 272 s.
Zverev, A. S.: Synoptická meteorológia. Alfa, Bratislava, 1986, 711 s.
Munzar, J. a kol.: Malý průvodce meteorologií. Praha, 1989, 248 s.
Bednář, J.: Meteorologie. Portál, s.r.o., Praha, 2003, 224 s., ISBN 80-7178-653-5

Glossary of meteorology. Second edition. American Meteorological Society, Boston, 2000, 855 s., ISBN 1-878220-34-9

Languages necessary to complete the course:
Slovak and English.

Notes:

Past grade distribution
Total number of evaluated students: 70

A	B	C	D	E	FX
82,86	11,43	5,71	0,0	0,0	0,0

Lecturers: RNDr. Marián Melo, PhD., doc. RNDr. Juraj Tóth, PhD.

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/2-UXX-102/15	Cognitive Psychology

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KAI/2-UXX-102/00

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 27

A	B	C	D	E	FX
55,56	33,33	0,0	3,7	0,0	7,41

Lecturers: doc. PhDr. Ján Rybár, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-107/10	Computer Systems

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 63

A	B	C	D	E	FX
88,89	0,0	1,59	1,59	4,76	3,17

Lecturers: Mgr. Miroslav Wagner

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-105/15	Computer-aided Science Laboratory

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: D, II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 65

A	B	C	D	E	FX
95,38	1,54	3,08	0,0	0,0	0,0

Lecturers: doc. RNDr. Peter Demkanin, PhD., PaedDr. Tünde Kiss, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-117/10	Databases

Educational activities:
Type of activities: course
Number of hours:
per week: 3 **per level/semester:** 39
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in educational activities (15%), project (45%)
Examination: test
Indicative grading scale: A 88 %, B 81 %, C 74 %, D 67 %, E 60 %
Scale of assessment (preliminary/final): 60/40

Learning outcomes:
The student will understand the basic concepts of the field, will have an overview of database models, will understand the problems that can arise when designing databases, will be able to use the SQL language to communicate with a database system, will be able to create a simple database.

Class syllabus:
- Databases around us. Spreadsheet and databases.
- Database system. Database models.
- Conceptual design of a database.
- Relational data model.
- Introduction to SQL.
- Normalization and denormalization, database design criteria.
- Databases and database software

Recommended literature:
• the teacher's own electronic study materials published on the course website or in the Moodle system
• Ďalšie vzdelávanie učiteľov základných škôl a stredných škôl v predmete informatika : Úvod do databáz : 1.2 Vzdelávanie nekvalifikovaných učiteľov informatiky na 2. stupni ZŠ a na SŠ / Zuzana Kubincová ... [et al.]. Bratislava : Štátny pedagogický ústav, 2010
• An introduction to database systems / C. J. Date. Boston : Pearson/Addison-Wesley, 2004

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 56

A	B	C	D	E	FX
41,07	19,64	19,64	10,71	7,14	1,79

Lecturers: doc. RNDr. Zuzana Kubincová, PhD.

Last change: 22.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-144/15	Design and Analysis of Algorithms

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Ongoing evaluation: active participation, projects
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Learning outcomes:
The student will be acquainted with the methods of creating efficient algorithms and will be able to design and use algorithms for selected problems.

Class syllabus:
304 / 5 000
Výsledky prekladov
- Complexity of algorithms, complexity analysis
- Methods of creating efficient algorithms (divide and conquer, greeds, dynamic programming, methods based on state space search)
- Search for a pattern in the text
- Graph algorithms
- Algorithms for NP difficult problems - probabilistic, random

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 14.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-280/19	Didactics Seminar in Informatics (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Interim evaluation: Active participation in lessons + participation in discussions (40%), educational desing of methodology for one topic from informatics for lower secondary school and its presentation (50%), analysis of real lesson of informatics for lower secondary pupils (10%)
Test: -
Indicative rating scale: A 90%, B 80%, C 70%, D 65%, E 60%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students are able to analyze and evaluate tasks from the point of view of teaching computer science. They will design and implement a lesson focused on a topic in informatics at the lower secondary school with regard to the stages of the cognitive process. They can analyze the lesson in terms of required input knowledge, goals, tasks ordering, methodological procedures used.

Class syllabus:
• Discussions about observations during pedagogical practice.
• Demonstrations of teaching topics verified in practice.
• Analysis of teaching lessons and problematic topics from informatics for lower secondary pupils.

Recommended literature:
• Electronic study materials published on the subject's website or moodle system
• Collection of innovative methodologies for the 2nd degree of university, IT Academy, 2020 (in Slovak)
• Varga, M. et al.: Further education of primary school and secondary school teachers in the subject of informatics, Didactics of Informatics at the University, Bratislava: State Pedagogical Institute, 2011 (in Slovak)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
77,78	11,11	0,0	0,0	0,0	11,11

Lecturers: doc. RNDr. Ľudmila Jašková, PhD.

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-281/19	Didactics Seminar in Informatics (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 10

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

Lecturers: doc. RNDr. Ľudmila Jašková, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-120/00	Didactics of Informatics (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

Educational level: D, II.

Prerequisites:

Course requirements:
Continuous assessment: premium tasks, written assignments, active participation in class, reports, didactic outputs, development and analysis of methodological materials.
Indicative grading scale: A 92 %, B 84 %, C 76 %, D 68 %, E 60 %

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 104

A	B	C	D	E	FX
83,65	6,73	2,88	5,77	0,96	0,0

Lecturers: prof. RNDr. Ivan Kalaš, PhD.

Last change: 22.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-219/10	Didactics of Informatics (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: D, II.

Prerequisites:

Course requirements:
Written assignments, active participation in class, reports, didactic outputs, creation and analysis of methodological materials, study of professional materials.
The results of problems solved, discussed and active participation in seminars are counted towards the final maximum of 100 points a student can earn. Another regular obligation is weekly writing on the topic studied.
Indicative grading scale: A 92 %, B 84 %, C 76 %, D 68 %, E 60 %

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 91

A	B	C	D	E	FX
84,62	8,79	5,49	0,0	0,0	1,1

Lecturers: prof. RNDr. Ivan Kalaš, PhD.

Last change: 22.06.2022

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KDMFI/2-UFY-961/15	**Course title:** Didactics of Physics
Number of credits: 3	
Educational level: II.	

Course requirements:

The final examination is realized by the student's discussion with the members of the commission on two topics from the content exams. Assessed: illustration of concepts on suitable examples / contexts / situations 0-3 points;
correctness of physical terminology 0-3 points; intelligibility of statements 0-3 points; responding to Commission questions concerning selected heading 0-3 points; responding to other commission questions
broader context 0-3 points. Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
The exam is successfully passed if the student obtains at least 50% of points.

Learning outcomes:

The graduate is ready to perform the tasks assigned to a beginning physics teacher.

Class syllabus:

Movement and force, movement on a circle. Movement of a mass point along a circle. Movements of bodies in the homogeneous gravitational field of the Earth from a kinematic point of view.
Movement and force, impulse of force and change of momentum Newton's laws of motion. Static and dynamic friction force during shear friction on a horizontal surface. Inclined plane, without friction, with friction. Momentum and impulse of force. The law of conservation of momentum.
Mechanical work, mechanical energy. The work of constant force. Variable force work - from a graph of force versus time. Working when stretching a linear spring. Potential energy of the body in a homogeneous gravitational field. Potential energy of the body in the radial gravitational field of the Earth. Kinetic energy of sliding motion. Mechanical energy conservation law.
Rigid body. Center of gravity. Equilibrium positions. Moment of force. Moment sentence. Simple machines - lever, pulley. Body stability.
Kinetic energy of a rotating body. The moment of inertia of a rigid body. Momentum. Momentum conservation. Steiner's theorem.
Radial gravitational field of the Earth. Newton's general law of gravitation. Movement of a body in a radial gravitational field, kinetic and potential energy of a body moving in a radial gravitational field. Geostationary satellite.
Fluid statics. Pressure. Hydrostatic pressure. Archimedes' law. Atmospheric pressure, changes in pressure and air density with altitude. Atmospheric pressure measurement.
Ideal fluid flow. Continuity equation. Bernoulli's equation for horizontal flow and for flow with vertical cant.
Heat and temperature. Mass heat capacity. Changes in energy states. Calorimetric equation.
It happens in an ideal gas, equation of state. Isothermal plot. Isobaric story. Isochoric plot. Adiabatic story. Equation of state of an ideal gas.
Electric voltage, electric current, electric resistance. Electromotive and terminal supply voltage. Work and power of direct current. Short circuit in electrical circuit.

DC circuit. Voltage and current measurement. Ohm's law for a part of an electrical circuit. The resulting resistance of resistors connected in series and side by side. Kirchhoff's laws. Dependence of conductor resistance on its temperature and dimensions. Volt-ampere characteristic of resistor and filament lamp.
Stationary magnetic field. Description of the magnetic field. Magnetic field of a permanent magnet. Magnetic field of a conductor with electric current. Electromagnet. Force of magnetic field on current conductor. Mutual force action of two conductors with current.
Unsteady magnetic field. Electromagnetic induction. Lenz's law. Transformation of alternating voltages. Power plant model, transmission system.
Oscillating movement. Spring oscillator. Mathematical pendulum. Relationship between harmonic oscillation and uniform motion along a circle. Kinematics and dynamics of the mentioned oscillators, graphs of dependences of instantaneous values of quantities describing oscillating motion from time and from instantaneous deviation from equilibrium position.
Waves. Equation of successive mechanical wave. Wave interference. Standing waves on a stretched fiber. Sound and its properties. Sound speed measurement.
Light and its properties. Light as an electromagnetic wave. Determination of water refractive index. Wave properties of light. Decomposition of light by a prism and an optical grating. RGB, CYM.
Atomic physics. Continuous and line emission and absorption spectra. Photoelectric effect, X-rays, origin and properties. Thomson's discovery of the electron. Rutherford's experiment.
Nuclear Physics. Radioactivity, half-life, fission and fusion.
Distances in space and basic concepts of stellar evolution.
Theoretical methods of cognition - classification, analytical-synthetic method, inductive-deductive method, analogy; Empirical methods of cognition - observation in physics education, developing students' skills associated with observation and communicating the results of observation; Empirical methods of cognition - measuring the values of a physics quantity, direct and indirect measurement; Empirical methods of cognition - measuring the interdependence of physical quantities; Empirical methods of cognition - experiment - student activity; Empirical methods of cognition - experiment - teacher planning; Classification of school experiments; Teaching methods - contextual teaching; Communication methods in school physics - graph linearization; Theoretical methods of cognition - graphic integration; Experiments and experiments with simple tools - their role and examples; Physics problem - formative function of a physics problem; Physics task - the function of the physics task in summative evaluation; The role of the teacher and the role of the student in physics education; Objectives of physics education; Defining the content of physics education curriculum. Application of interdisciplinary relationships in teaching physics. Realization of cross-curricular goals by physics education; Formal, non-formal and informal physics education.

State exam syllabus:

Recommended literature:
Literature recommended by subjects of master's study.
Physics textbooks for lower and higher secondary schools.
Selected foreign physics textbook.
Documents of the selected educational system.

Languages necessary to complete the course:
Slovak and English.

Last change: 12.11.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-104/15	Didactics of Physics (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: D, 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: 59

A	B	C	D	E	FX
59,32	30,51	8,47	0,0	0,0	1,69

Lecturers: doc. PaedDr. Viera Haverlíková, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-106/15	Didactics of Physics (2)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 1 / 1 **per level/semester:** 13 / 13
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

Educational level: D, II.

Prerequisites:

Course requirements:
Continuous assessment: seminar activities (4x10 marks)
Exam: written (60 marks)
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
Credits will not be awarded if a student scores less than 50%.

Learning outcomes:
Graduates will have developed skills needed in creating a lesson in physics, choosing the goals of the lesson, ways and means of fulfilling these goals. They will also have developed personal qualities, support for the assertive behavior and communication skills of the future physics teacher.

Class syllabus:
From learning sequence, through the topic in teaching to the thematic unit.
Objectives of teaching physics at primary and secondary school.
Physics as a part of science education and as a part of technology basics.
Specifics of teacher's work in non-formal education (physics circle, club, physical competitions), non-formal education of students outside school.
Examples of teaching sequences and topics for analysis are mainly in the areas of electromagnetic induction, mechanical and electromagnetic waves, geometric and wave optics.

Recommended literature:

Languages necessary to complete the course:
Slovak and English.

Notes:

Past grade distribution
Total number of evaluated students: 55

A	B	C	D	E	FX
69,09	21,82	5,45	1,82	1,82	0,0

Lecturers: doc. PaedDr. Viera Haverlíková, PhD.

Last change: 18.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-205/15	Didactics of Physics (3)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: on-site learning

Number of credits: 5

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: 43

A	B	C	D	E	FX
90,7	6,98	2,33	0,0	0,0	0,0

Lecturers: doc. RNDr. Peter Demkanin, PhD., Mgr. Karolína Šromeková, PaedDr. Tünde Kiss, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-108/15	Didactics of Programming (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: D, II.

Prerequisites:

Course requirements:
Continuous assessment: The student can get 50% of points for the preparation of topics for computer science lessons, another 25% of points for the preparation of detailed methodological material for teachers. He can get the remaining 25% of points for the didactic output.
Indicative assessment scale: A 92%, B 84%, C 77%, D 68%, E 60%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students are able to analyze and evaluate programming languages, environments, textbooks and other materials from the perspective of programming didactics. They will compile and implement a lesson focused on programming in primary school with regard to the stages of the cognitive process.

Class syllabus:
• Programming languages and environments in terms of programming didactics
• Basic programming constructions and their order in teaching programming for different programming languages
• Programming in the state educational program
• Teaching programming in primary school
• Didactics of teaching the topic of sequence of commands
• The topic of the cycle and various didactic procedures of its teaching
• Variables and students' ability to understand their meaning and how they are used in programming
• Construction of a conditional statement in programming languages, logical conditions and didactic procedures suitable for mastering a conditional statement
• Testing students in teaching programming
• The importance of student evaluation in didactics, project teaching, peer evaluation of programming projects

Recommended literature:
• The teacher's own electronic study materials published on the subject's website, resp. in Moodle
• Ľubomír Salanci [et al.] Programming Didactics 1: Further education of qualified computer science teachers at the 2nd level of primary school and at secondary school. - 1st ed. - Bratislava:

Štátny pedagogický ústav, 2010. - 36 s. - (In-service training of primary and secondary school teachers in computer science)
• Ľubomír Salanci [et al.]: Didactics of programming 2: Further education of qualified computer science teachers at the 2nd level of primary and secondary schools. - 1st ed. - Bratislava: Štátny pedagogický ústav, 2010. - 36 s. - (In-service training of primary and secondary school teachers in computer science)
• Vaníček, J., Nagyová, I., Tomcsányiová, M .: Programming in Scratch for the 2nd level of primary school. University of South Bohemia in České Budějovice, 2020. • Černochová, M., Vaňková, P., Štípek, J .: Scratch programming for advanced - projects for the 2nd grade of primary school. University of South Bohemia in České Budějovice, 2020.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 44

A	B	C	D	E	FX
75,0	22,73	2,27	0,0	0,0	0,0

Lecturers: doc. PaedDr. Monika Tomcsányiová, PhD.

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-109/15	Didactics of Programming (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

Educational level: D, II.

Prerequisites: FMFI.KDMFI/2-UIN-108/15 - Didactics of Programming (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 40

A	B	C	D	E	FX
60,0	10,0	12,5	5,0	7,5	5,0

Lecturers: doc. RNDr. Ľudmila Jašková, PhD.

Last change: 04.06.2021

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KAG+KDMFI/2-UXX-991/15	**Course title:** Diploma Thesis Defense
Number of credits: 14	
Educational level: II.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-932/13	Diploma Thesis in Computer Science Seminar (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 13
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Active participation, reporting on ongoing work on the thesis.
A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
The graduate of the course is able to obtain and sort information from information sources, especially from monographs, journal articles, conference proceedings and university textbooks. The graduate is able to plan research in the area of the thesis.

Class syllabus:
Formulating the objectives of the thesis on the basis of its assignment; obtaining, sorting and using available resources; working with electronic information sources; formulating research questions, searching for research methods suitable for the topic of the thesis.

Recommended literature:
Creswell JW. Educational research: Planning, conducting, and evaluating quantitative. Prentice Hall Upper Saddle River, NJ; 2002.
Sources listed in the thesis assignment. Sources available in databases (e.g. wos, scopus, researchgate). Publications by members of the Department of Didactics of Computer Science.
Textbook on research methodology in science teaching recommended by the thesis supervisor.

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
88,0	8,0	0,0	0,0	4,0	0,0

Lecturers: doc. RNDr. Zuzana Kubincová, PhD.

Last change: 17.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-934/13	Diploma Thesis in Computer Science Seminar (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 13
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Active participation, ongoing reporting on work on the thesis.
A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
The graduate is able to elaborate the chosen topic at the level of a scientific study with a representative selection of literature, with appropriately chosen scientific procedures and hypotheses that can be verified. The graduate is able to formulate the contribution of his/her own work in the field of informatics teaching.

Class syllabus:
Development of argumentation skills, causal thinking and creativity in the area of the thesis topic.
Development of abilities to present the results of own work in the field of the thesis topic.

Recommended literature:
Creswell JW. Educational research: Planning, conducting, and evaluating quantitative. Prentice Hall Upper Saddle River, NJ; 2002.
Sources listed in the thesis assignment. Sources available in databases (e.g. wos, scopus, researchgate). Publications by members of the Department of Didactics of Computer Science.
Textbook on research methodology in science teaching recommended by the thesis supervisor.

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
61,9	23,81	9,52	4,76	0,0	0,0

Lecturers: doc. RNDr. Zuzana Kubincová, PhD.

Last change: 17.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-936/15	Diploma Thesis in Computer Science Seminar (3)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 13
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:
Active participation, ongoing reporting on work on the thesis. 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 is able to work on the chosen topic at the level of a scientific study with a representative selection of literature, with appropriately chosen scientific procedures and hypotheses that can be verified. He/she is able to formulate the contribution of his/her own work in the field of computer science teaching and adequately present the results of his/her work to the professional public.

Class syllabus:
Development of the ability to present the results of own work in the field of the thesis topic. Development of argumentation skills, causal thinking and creativity in the area of the thesis topic.

Recommended literature:
Creswell JW. Educational research: Planning, conducting, and evaluating quantitative. Prentice Hall Upper Saddle River, NJ; 2002. Sources listed in the thesis assignment. Sources available in databases (e.g. wos, scopus, researchgate). Publications by members of the Department of Didactics of Computer Science. Textbook on research methodology in science teaching recommended by the thesis supervisor.

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 10

A	B	C	D	E	FX
80,0	20,0	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Zuzana Kubincová, PhD.
Last change: 17.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-933/15	Diploma Thesis in Physics Seminar (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 13
Form of the course: on-site learning

Number of credits: 1

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: 42

A	B	C	D	E	FX
92,86	0,0	4,76	2,38	0,0	0,0

Lecturers: doc. PaedDr. Klára Velmovská, PhD.

Last change: 06.02.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-934/15	Diploma Thesis in Physics Seminar (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 1 **per level/semester:** 13
Form of the course: on-site learning

Number of credits: 1

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: 38

A	B	C	D	E	FX
94,74	2,63	2,63	0,0	0,0	0,0

Lecturers: doc. RNDr. Peter Demkanin, PhD.

Last change: 06.02.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KEF/2-UFY-212/15	Electronics and Communication for Teachers

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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: 43

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

Lecturers: doc. RNDr. František Kundracik, CSc., PaedDr. Lukáš Bartošovič, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/2-MXX-130/21	Elements of AI

Educational activities:
Type of activities: independent work
Number of hours:
per week: 25 **per level/semester:** 325
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Passing the online course https://course.elementsofai.com/ (in Enlish or Slovak version).

Learning outcomes:
The student will get acquainted with selected basic concepts of artificial intelligence and their use in solving various practical tasks.

Class syllabus:
1. What is artificial intelligence: related areas, AI philosophy.
2. Troubleshooting and UI: Browsing and troubleshooting, browsing and games
3. Probability and chance, Bayes' theorem, naive Bayesian classification.
4. Machine learning: nearest neighbor classifier, regression.
5. Neural networks: basics, creation, modern techniques.
6. Consequences: on predicting the future, the effects of AI on society, summary.

Recommended literature:
Russell S., Norwig P. (2010). Artificial Intelligence: A Modern Approach, (3rd ed.), Prentice Hall. Available in faculty library.
Marsland S. (2015). Machine Learning: An Algorithmic Perspective, (2nd ed.), CRC Press.

Languages necessary to complete the course:
Slovak or English

Notes:
The course consists of 20 numerical and 5 text-based tasks. Numerical tasks are checked automatically, text-based tasks are evaluated anonymously by students.

Past grade distribution
Total number of evaluated students: 37

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

Lecturers: doc. RNDr. Mária Markošová, PhD.

Last change: 22.08.2021
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAI/2-MXX-130/21	Elements of AI

Educational activities:
Type of activities: independent work
Number of hours:
per week: 25 **per level/semester:** 325
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Passing the online course https://course.elementsofai.com/ (in Enlish or Slovak version).

Learning outcomes:
The student will get acquainted with selected basic concepts of artificial intelligence and their use in solving various practical tasks.

Class syllabus:
1. What is artificial intelligence: related areas, AI philosophy.
2. Troubleshooting and UI: Browsing and troubleshooting, browsing and games
3. Probability and chance, Bayes' theorem, naive Bayesian classification.
4. Machine learning: nearest neighbor classifier, regression.
5. Neural networks: basics, creation, modern techniques.
6. Consequences: on predicting the future, the effects of AI on society, summary.

Recommended literature:
Russell S., Norwig P. (2010). Artificial Intelligence: A Modern Approach, (3rd ed.), Prentice Hall. Available in faculty library.
Marsland S. (2015). Machine Learning: An Algorithmic Perspective, (2nd ed.), CRC Press.

Languages necessary to complete the course:
Slovak or English

Notes:
The course consists of 20 numerical and 5 text-based tasks. Numerical tasks are checked automatically, text-based tasks are evaluated anonymously by students.

Past grade distribution
Total number of evaluated students: 37

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

Lecturers: doc. RNDr. Mária Markošová, PhD.

Last change: 22.08.2021
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-233/13	English Conversation Course (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1., 3.

Educational level: I., II.

Prerequisites:

Course requirements:
tests, presentations, essays
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Continual improvement of all language skills focused on communication/speaking, listening comprehension and writing. The emphasis is on discourse, lexicology and morphology, word-bank broadening of communicational English as well as English for specific purposes appropriate for university students. This course is a follow up of the previously taught ESP course.

Class syllabus:
This course's focus is to broaden spoken/communicational English for students with B2/C1 level of English knowledge.

Recommended literature:
Appropriate study material is supplied based on the participants'level of English by the lecturer. (Sources- The Guardian, The Herald Morning Sun. The Nine News, The West Australian, BBC News and podcasts, CNN podcasts).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 215

A	B	C	D	E	FX
67,44	13,02	6,51	1,86	1,4	9,77

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-234/13	English Conversation Course (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2., 4.

Educational level: I., II.

Prerequisites:

Course requirements:
tests, oral presentations, essays
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Continual improvement of all language skills focused on communication/speaking, listening comprehension and writing. The emphasis is on discourse, lexicology and morphology, word-bank broadening of communicational/spoken English as well as English for specific purpose appropriate for university students. This course is a follow up of the Conversational English course 1.

Class syllabus:
This course's focus is to broaden spoken/communicational English for students with B2/C1 level of English knowledge(Upper-Intermediate/Lower Advanced).

Recommended literature:
Appropriate study material is supplied based on the participants'level of English by the lecturer. (Sources- The Guardian, The Herald Morning Sun. The Nine News, The West Australian, BBC News and podcasts, CNN podcasts).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 146

A	B	C	D	E	FX
77,4	12,33	3,42	1,37	0,0	5,48

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:
Capelle Guy, Menand Robert: Le Nouveau taxi 1, Hachette FLE Paris, France 2009, ISBN 978-2-01-155548 - 9

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 435

A	B	C	D	E	FX
45,75	20,0	18,85	8,74	2,3	4,37

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-142/00	French Language (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:

Class syllabus:
The subject continues the program of French language (1) and provides courses of essential and intermediate French language.

Recommended literature:
Capelle Guy, Menand Robert: Le Nouveau taxi 1, Hachette FLE Paris, France 2009, ISBN 978-2-01-155548 - 9

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 265

A	B	C	D	E	FX
38,87	25,28	19,62	10,19	2,64	3,4

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:
Capelle Guy, Menand Robert: Le Nouveau taxi 1, Hachette FLE Paris, France 2009, ISBN 978-2-01-155548 - 9

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 104

A	B	C	D	E	FX
39,42	27,88	21,15	6,73	0,96	3,85

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:
Menand Robert: Le Nouveau taxi 2, Hachette FLE, Paris, France 2009, ISBN 978-2-01-155551 - 9

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 74

A	B	C	D	E	FX
41,89	32,43	17,57	2,7	1,35	4,05

Lecturers: Mgr. Ľubomíra Kožehubová

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
To master the fundamentals of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency)

Class syllabus:
German language is taught at three levels: beginner, intermediate and advanced. Students opt for one of them depending on whether they need to learn the fundamentals or maintain and/or improve their previous knowledge.
This course's focus is to master the fundamentals of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency)

Recommended literature:
Appropriate study material is supplied by teacher based on the participants'level of German proficiency.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 734

A	B	C	D	E	FX
36,1	27,25	19,62	8,99	2,72	5,31

Lecturers: Mgr. Alexandra Maďarová, Mgr. Simona Tomášková, PhD.

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
To master the fundamentals of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency)

Class syllabus:
German language is taught at two levels: beginner and intermediate. Students opt for one of them depending on whether they wish to obtain the fundamentals of the language or wish to maintain and/or improve previous knowledge of German.
This course's focus is to to master the fundamentals of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency)

Recommended literature:
Appropriate study material is supplied by teacher based on the participants'level of German proficiency

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 480

A	B	C	D	E	FX
36,04	20,21	20,83	13,13	3,33	6,46

Lecturers: Mgr. Alexandra Maďarová, Mgr. Simona Tomášková, PhD.

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Master the basics of general language and basic professional terminology of individual fields of study (depending on the advanced level of students)

Class syllabus:
The course is a follow-up to the German language (1,2). The subject provides a course of intermediate or advanced German language.
This course's focus is to deepen the knowledge of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency).

Recommended literature:
Appropriate study material is supplied by teacher based on the participants'level of German proficiency.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 165

A	B	C	D	E	FX
41,21	25,45	20,61	6,67	2,42	3,64

Lecturers: Mgr. Alexandra Maďarová, Mgr. Simona Tomášková, PhD.

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-252/00	German Language (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Master the basics of general language and basic professional terminology of individual fields of study (depending on the advanced level of students)

Class syllabus:
The course is a follow-up to the German language (1-3). It provides a course of intermediate and advanced German language.
This course's focus is to deepen the knowledge of the common language and basic technical terms of particular fields of study (depending on the student's level of German proficiency).

Recommended literature:
Appropriate study material is supplied by teacher based on the participants'level of German proficiency.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 90

A	B	C	D	E	FX
42,22	24,44	12,22	12,22	3,33	5,56

Lecturers: Mgr. Alexandra Maďarová, Mgr. Simona Tomášková, PhD.

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-108/00	History of Informatics

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in class, presentation
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will know the basic milestones in the history of storing, transmitting and processing information from antiquity to the present day, as well as a brief history of computer science.

Class syllabus:
• History of storage, transmission and processing of information (various storage media: stone, clay, papyrus, parchment, paper, magnetic record;
• information transmission: messenger, sound and light signals, wire telegraph I wireless, radio, television, internet;
• information processing: fonts, positional systems, analog aids, the first calculators, the idea of a universal computer, digital machines, the first electromechanical and electronic computers, a brief look at the development of computer technology after the Second World War).
• History of informatics: algorithm, development in mathematics that influenced informatics: algebra, variables, mathematics mathematics, development of analysis, logic, decidability, computability, efficiency.
• Brief overview of the history of computer technology and informatics in Slovakia (within Czechoslovakia)

Recommended literature:
- Teacher's own electronic study materials published on the course website or in the Moodle system
- Gruska, Havel, Zelený, Wiedermann. Počítačová revolúcia, Sofsem 1984

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 89

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 17.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KAG/2-UXX-103/00	History of Mathematics

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 43

A	B	C	D	E	FX
79,07	4,65	13,95	0,0	0,0	2,33

Lecturers: prof. RNDr. Ladislav Kvasz, Dr.

Last change: 02.06.2015

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2021/2022	
University: Comenius University Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFI.KDMFI/2-UIN-951/15	**Course title:** Informatics and Didactics of Informatics
Number of credits: 3	
Educational level: II.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-268/15	Information Systems

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 17

A	B	C	D	E	FX
88,24	5,88	0,0	0,0	5,88	0,0

Lecturers: doc. RNDr. Ľudmila Jašková, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-MXX-131/21	International Team-based Research Project

Educational activities:
Type of activities: course / independent work
Number of hours:
per week: 3 **per level/semester:** 39 / 30s
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in research in an international student team (25%), presentation of work in a workshop (25%), scientific article (50%)
Indicative evaluation scale: A 90 %, B 80 %, C 70 %, D 60 %, E 50 %
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will learn in the team to agree on a common research topic, formulate research questions, determine research methods for the problem, collect and evaluate data, discuss their findings, present research results to the professional public, analyze and evaluate the scientific work of their colleagues, prepare a scientific article suitable for publication

Class syllabus:
- Research methodology
- Design and implementation of a research project in an international group (preferably interdisciplinary)
- Methods and tools for collaboration in virtual space, collaboration in science and practice
- Academic writing, presentation of research results through scientific articles; objectives, content and structure of scientific articles; forms of academic publication, publication forums and evaluation of their quality
- Quality assurance and feedback - peer review
- Communication of results through posters or conference presentations

Recommended literature:
- Teachers' own electronic study materials published on the course website or in the Moodle system
- Gavora, Peter a kol. 2010. Elektronická učebnica pedagogického výskumu. [online]. Bratislava : Univerzita Komenského, 2010. Dostupné na: http://www.e-metodologia.fedu.uniba.sk/ ISBN 978–80–223–2951–4.

- Tharenou, P., Donohue, R. and Cooper, B., 2007. Management research methods. Cambridge University Press.
- Topping, A., 2015: The Quantitative-Qualitative Continium. In: Gerrish, K. and Lathlean, J., The Research Process in Nursing, p. 159-172
- Williamson, K. and Johanson, G. eds., 2017. Research methods: Information, systems, and contexts. Chandos Publishing.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 5

A	B	C	D	E	FX
60,0	0,0	0,0	0,0	40,0	0,0

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change: 22.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-115/15	Methods for Solving Physics Problems

Educational activities:
Type of activities: seminar
Number of hours:
per week: 3 **per level/semester:** 39
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2.

Educational level: D, II.

Prerequisites:

Course requirements:
Continuous assessment: homeworks (4x10 marks), discussions (3x10 marks), tests (2x15 marks).
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%
Credits will not be awarded if a student scores less than 50%.

Learning outcomes:
The graduate will know several forms of physical problems, selected methods of assigning and solving physical problems and methods of evaluating students' solutions to physical problems. Will be able to actively use physics tasks in secondary school.

Class syllabus:
Physics task, physics problem. Assignment. The general plan of the process of solving. Modelling in solving a physical problem. Mathematization of the task situation. Graphic and numerical solution of the problem. Dynamic modelling method. Solution methods using computer programs and audiovisual means. Solution methods using the system of computer-assisted science laboratory Coach.

Recommended literature:

Languages necessary to complete the course:
Slovak and English.

Notes:

Past grade distribution
Total number of evaluated students: 59

A	B	C	D	E	FX
89,83	6,78	3,39	0,0	0,0	0,0

Lecturers: doc. PaedDr. Klára Velmovská, PhD.

Last change: 18.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-238/15	Mobile Platform Programming for Secondary Schools

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: The student can get 50% points for active participation in seminars and task development. He will get another 50% of points for the design and implementation of the project.
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
• has an overview of programming environments that are suitable for programming applications for mobile platforms
• is able to recognize which environment is suitable for high school students
• knows and is able to apply knowledge of other programming languages in a language that is suitable for programming mobile devices
• is able to assess which applications in the selected programming tool are suitable and reasonably demanding for high school students
• programs moderately demanding projects in the selected environment

Class syllabus:
• Programming languages and environments for mobile devices
• Overview of mobile platforms and programming approaches for them
• Programming tools for programming mobile applications that are suitable for high school students.
• Multi-platform development environment versus platform-specific development environment
• Cycle and its use in the selected programming language
• Create and use variables in simple tasks for mobile devices
• Conditional statement construction
• Project specification and design
• Project implementation, debugging
• Project presentation, evaluation and project discussion

Recommended literature:
The teacher's own electronic study materials published on the subject's website, resp. in Moodle

Beginning Android 4 application development / Wei-Meng Lee; Chaim Krause. Indianapolis, Ind. : Wrox / John Wiley & Sons, 2012
MIT App Inventor, website and educational materials from www.appinventor.mit.edu

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 11

A	B	C	D	E	FX
45,45	27,27	9,09	0,0	0,0	18,18

Lecturers: doc. PaedDr. Monika Tomcsányiová, PhD.

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-242/15	Networks

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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

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

Lecturers: Mgr. Miroslav Wagner

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-111/15	Operating Systems

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2., 4.

Educational level: II.

Prerequisites: FMFI.KDMFI/2-UIN-107/10 - Computer Systems

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 20

A	B	C	D	E	FX
45,0	15,0	20,0	0,0	20,0	0,0

Lecturers: Mgr. Miroslav Wagner

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-121/18	Pedagogic Diagnostics

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Antirequisites: FMFI-Prif.KDPP/2-UXX-121/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 297

A	B	C	D	E	FX
44,78	27,95	18,18	5,39	2,36	1,35

Lecturers: Mgr. Lucia Budinská, PhD., Mgr. Karolína Miková, PhD.

Last change: 14.02.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-123/15	Pedagogic Research Methodology (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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: 136

A	B	C	D	E	FX
69,12	19,12	5,88	1,47	2,21	2,21

Lecturers: Mgr. Karolína Miková, PhD., PaedDr. Peter Vankúš, PhD.

Last change: 08.06.2017

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-124/15	Pedagogic Research Methodology (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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: 43

A	B	C	D	E	FX
65,12	16,28	2,33	2,33	2,33	11,63

Lecturers: PaedDr. Peter Vankúš, PhD., Mgr. Karolína Miková, PhD.

Last change: 08.06.2017

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI-PriF.KDPP/2-UXX-122/15	Philosophical Anthropology and Axiology

Educational activities:
Type of activities: lecture
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: II.

Prerequisites:

Antirequisites: FMFI-PriF.KDPP/2-UXX-122/10

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 155

A	B	C	D	E	FX
76,77	18,06	3,23	1,29	0,65	0,0

Lecturers: Mgr. Štefan Zolcer, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-110/00	Physical Education and Sport (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1657

A	B	C	D	E	FX
98,37	0,6	0,06	0,0	0,0	0,97

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

Last change: 15.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-120/00	Physical Education and Sport (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1557

A	B	C	D	E	FX
98,52	0,39	0,06	0,06	0,06	0,9

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

Last change: 15.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-210/00	Physical Education and Sport (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1281

A	B	C	D	E	FX
98,75	0,47	0,08	0,0	0,0	0,7

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

Last change: 15.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-220/00	Physical Education and Sport (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: II.

Prerequisites:

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

Learning outcomes:

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

Recommended literature:

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1110

A	B	C	D	E	FX
98,47	0,45	0,09	0,09	0,09	0,81

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

Last change: 15.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-111/15	Practical in Class Experiments in Physics (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: D, 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: 59

A	B	C	D	E	FX
93,22	5,08	0,0	0,0	0,0	1,69

Lecturers: PaedDr. Peter Horváth, PhD., PaedDr. Jana Jakubičková, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-211/15	Practical in Class Experiments in Physics (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 43

A	B	C	D	E	FX
83,72	11,63	2,33	0,0	2,33	0,0

Lecturers: doc. PaedDr. Viera Haverlíková, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UFY-165/15	Practical in Class Experiments in Physics (3)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 45

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

Lecturers: PaedDr. Peter Horváth, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-262/15	Programming Competitions

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in class, homework, written work
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Learning outcomes:
310 / 5 000
Výsledky prekladov
Students will have an overview of computer competitions for primary and secondary school, respectively. with competitions that have no restrictions on participants. They will know the characteristics of these competitions in order to be able to guide the students in which to participate. They will know the difficulty level of the tasks in each competition.

Class syllabus:
Overview of IT competitions with a focus on computer programming, resp. Troubleshooting.
Get acquainted with their rules, organization, target group and other specifics. Samples of problems from these competitions and their solutions.

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 14.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-236/15	Programming of Application for WEB (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Intermediate assessment: practical assignments
Indicative evaluation scale: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
The student will be able to create a more complex educational web application using databases, or other repositories and modern technologies for the development of dynamic web applications.

Class syllabus:
- HTML5 - Canvas, Web Storage, Media, Drag&Drop
- AJAX - manipulation of objects with their properties (also CSS), effects, event handling, efficient work with forms, etc.
- Two-way communication between server and client
- JQuery, JQueryUI, Vue.js, or other suitable framework

Recommended literature:
• own electronic texts published on the website or in the Moodle environment
• actual documentation for each technology
• w3schools.com

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 2

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

Lecturers: PaedDr. Roman Hrušecký, PhD.

Last change: 21.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-202/00	Robotics in Education (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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: 74

A	B	C	D	E	FX
91,89	2,7	1,35	2,7	0,0	1,35

Lecturers: Mgr. Karolína Miková, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Basic communication in Russian, developing other Russian language skills - listening comprehension, reading and writing.

Class syllabus:
To master the fundamentals of general Russian. The language level is A1.
Learning the Cyrillic (Russian) alphabet, gaining basic language competence, building up skills and confidence in dealing with unfamiliar authentic and semi-authentic texts.
The subject provides a course in Russian language for beginners.

Recommended literature:
The textbook: : Точка Ру A1 (Ольга Долматова, Екатерина Новачац), pracovné karty Падежи 1 (Л.С. Безкоровайная, В.Е. Штыленко).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 707

A	B	C	D	E	FX
58,56	16,55	11,03	4,38	1,84	7,64

Lecturers: Viktoria Mirsalova

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Basic communication in Russian, developing other Russian language skills - listening comprehension, reading and writing.

Class syllabus:
To master the fundamentals of general Russian.
Learning the Cyrillic (Russian) alphabet, gaining basic language competence, building up skills and confidence in dealing with unfamiliar authentic and semi-authentic texts.
The subject continues the program of Russian language (1) and provides a course of Russian for beginners.

Recommended literature:
Textbook: Точка Ру A1 (Ольга Долматова, Екатерина Новачац), pracovné karty Падежи 1 (Л.С. Безкоровайная, В.Е. Штыленко).

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 421

A	B	C	D	E	FX
65,08	15,68	8,79	3,8	0,95	5,7

Lecturers: Viktoria Mirsalova

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Basic communication in Russian, developing other Russian language skills - listening comprehension, reading and writing.

Class syllabus:
Learning the handwritten Russian (Russian Cursive Cyrillic), developing further language skills, gaining knowledge of Russian culture, history and way of life, pre-intermediate to intermediate grammar and vocabulary.
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
Точка Ру A2 (Ольга Долматова, Екатерина Новачац) a Short Stories in Russian (Olly Richards, Alex Rowlings)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 200

A	B	C	D	E	FX
70,5	17,5	8,5	2,5	0,0	1,0

Lecturers: Viktoria Mirsalova

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

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

Learning outcomes:
Learning the handwritten Russian (Russian Cursive Cyrillic), developing further language skills, gaining knowledge of Russian culture, history and way of life, pre-intermediate to intermediate grammar and vocabulary.

Class syllabus:
Learning the handwritten Russian (Russian Cursive Cyrillic), developing further language skills, gaining knowledge of Russian culture, history and way of life, pre-intermediate to intermediate grammar and vocabulary.
The course "Russian for Intermediate Students" is a follow-up to "Russian for Beginners". The subject of the course is general Russian in the range appropriate to the given level.

Recommended literature:
Точка Ру A2 (Ольга Долматова, Екатерина Новачац) a Short Stories in Russian (Olly Richards, Alex Rowlings)

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 144

A	B	C	D	E	FX
75,69	13,19	6,94	2,78	0,69	0,69

Lecturers: Viktoria Mirsalova

Last change: 20.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-143/18	School Network Administration

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: II.

Prerequisites:

Antirequisites: FMFI.KDMFI/2-UIN-143/15

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 11

A	B	C	D	E	FX
90,91	0,0	0,0	0,0	0,0	9,09

Lecturers: Mgr. Miroslav Wagner

Last change:

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-171/20	Slovak Language for Foreign Students (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I., II.

Prerequisites:

Course requirements:
tests
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
This course is aimed for foreign students to learn the fundamentals of the Slovak language with the focus on basic communication as well as all other language skills- listening comprehension,reading and writing.

Class syllabus:
The sylabus is targeted at the comprehension of the basics of the Slovak language for the absolute beginners (A1).

Recommended literature:
Krížom- Krážom Slovenčina 1, additional material to further support the covered topics.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
47,83	0,0	0,0	0,0	0,0	52,17

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-172/20	Slovak Language for Foreign Students (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I., II.

Prerequisites:

Course requirements:
tests
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
This course is aimed for foreign students to learn the fundamentals of the Slovak language with the focus on basic communication as well as all other language skills- listening comprehension,reading and writing.

Class syllabus:
The sylabus is targeted at the comprehension of the basics of the Slovak language for the absolute beginners (A1) and this course is a follow up course to the Slovak language course 1.

Recommended literature:
Krížom- Krážom Slovenčina 1, additional material to further support the covered topics

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 22

A	B	C	D	E	FX
81,82	0,0	4,55	0,0	0,0	13,64

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-271/20	Slovak Language for Foreign Students (3)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: I., II.

Prerequisites:

Course requirements:
tests
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
This course is aimed for foreign students to better comprehend all the language skills important to enable correct usage of the Slovak language – listening comprehension, reading, writing and speaking.

Class syllabus:
The sylabus is targeted at the comprehension of all the language skills of the Slovak language , and it is a follow up course to the Slovak language course 2.

Recommended literature:
Krížom-Krážom Slovenčina 2, additional material to further support the covered topics.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

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

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KJP/1-MXX-272/20	Slovak Language for Foreign Students (4)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 4.

Educational level: I., II.

Prerequisites:

Course requirements:
tests
Course prerequisites:
https://fmph.uniba.sk/microsites/kjp/katedra-jazykovej-pripravy/poziadavky-na-udelenie-priebezneho-hodnotenia-aj1aj2aj3-ostatne-kurzy/
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
This course is aimed for foreign students to better comprehend all the language skills important to enable correct usage of the Slovak language – listening comprehension, reading, writing and speaking.

Class syllabus:
The sylabus is targeted at the comprehension of all the language skills of the Slovak language , and it is a follow up course to the Slovak language course 3.

Recommended literature:
Krížom-Krážom Slovenčina 2, additional material to further support the covered topics.

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 7

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

Lecturers: Mgr. Aneta Barnes

Last change: 21.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTV/2-MXX-115/17	Sports in Natur (1)

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

Number of credits: 2

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Grades: A 90%, B 80%, C 70%, D 60%, E 50%
The condition for the award of 1 or 2 credits is the completion of a multi-day course in its full scope, or the completion of one-day courses in the scope of 4 days. Candidates can apply to the leaders of individual courses. From the presented offer of courses, you can choose the one that suits your interests, abilities and deadlines.

Learning outcomes:
Acquisition and development of basic motor skills and abilities in selected sports: skiing and snowboarding. Mastering the correct technique of performing individual movements, which are necessary for skiing and snowboarding.

Class syllabus:
The student can sign up for the outdoor sports courses offered by the department: skiing, snowboarding. The lessons in the courses are focused on the development of basic and special movement skills and mastering the techniques needed for the sports.

Recommended literature:

Languages necessary to complete the course:
Slovak

Notes:
KTVŠ does not rent ski equipment.

Past grade distribution
Total number of evaluated students: 83

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

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

Last change: 16.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

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

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

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Grades: A 90%, B 80%, C 70%, D 60%, E 50%.
The condition for the award of 1 or 2 credits is the completion of a multi-day course in its full scope, or the completion of one-day courses in the scope of 4 days. Candidates can apply to the leaders of individual courses. From the presented offer of courses, you can choose the one that suits your interests, abilities and deadlines.

Learning outcomes:
Creating a positive and lasting relationship with physical activity. Acquisition and mastery of basic motor skills and abilities in outdoor sports: windsurfing, beach volleyball, water tourism - river rafting, hiking and other sports according to interest. Training and improving the technique needed for the sports.

Class syllabus:
The student can sign up for the outdoor sports courses offered by the department: water tourism - river rafting, windsurfing, beach volleyball, hiking and other hobby sports. The lessons in the courses are focused on the development of basic and special movement skills and, mastering the techniques needed for the sports.

Recommended literature:

Languages necessary to complete the course:
Slovak

Notes:
KTVŠ will provide sports equipment.

Past grade distribution
Total number of evaluated students: 50

A	B	C	D	E	FX
94,0	0,0	0,0	0,0	0,0	6,0

Lecturers: Mgr. Martin Dovičák, PhD., Mgr. Tomáš Kuchár, PhD., Mgr. Jana Leginusová, PaedDr. Dana Mašlejová, Mgr. Ladislav Mókus, PaedDr. Mikuláš Ortutay, Mgr. Júlia Raábová, PhD., Mgr. Tomáš Lovecký
Last change: 16.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-831/15	Teaching Practice in Computer Science (2)

Educational activities:
Type of activities: practice
Number of hours:
per week: **per level/semester:** 60s
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: II.

Prerequisites:

Course requirements:
Presence in the school every day for 4-5 hours, totaling in per practice 60 teaching hours. Perform a minimum of 2 micro-performances in the trainee teacher's classes. Teach 4 lessons independently under the supervision of the trainee teacher. Evaluation will be based on the student's written outcomes and the faculty teacher's evaluation.
A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 80/20

Learning outcomes:
The student is more thoroughly familiar with the work of a teacher, focusing on the teacher's perspective on teaching and the running of a school. He/she has the experience of detailed written preparation for a lesson with independent teaching of the whole lesson and reflection on the lessons taught.

Class syllabus:
The content corresponds to the current topics taught during the internship at the school.

Recommended literature:
Literature recommended by the faculty teacher.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 27

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 17.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-832/15	Teaching Practice in Computer Science (3)

Educational activities:
Type of activities: practice
Number of hours:
per week: **per level/semester:** 90s
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Be present in the school every day for 4-5 hours, totaling in per practice 90 teaching hours. To tutor 12 lessons independently on the basis of own written preparation under the supervision of a practising teacher. Evaluation will be based on the student's written outcomes, and the faculty teacher's evaluation.
A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 80/20

Learning outcomes:
The student will gain experience in conducting lessons that build on each other. The lessons taught will undergo detailed reflection. The student will become more familiar with the overall running of the school from the teacher's point of view.

Class syllabus:
The content corresponds to the current topics taught during the internship at the school.

Recommended literature:
Currently used primary and secondary school computer science textbooks and primary and secondary school collections of assignments
Literature recommended by faculty teachers.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 37

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 17.06.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-821/15	Teaching Practice in Physics (2)

Educational activities:
Type of activities: practice
Number of hours:
per week: **per level/semester:** 60s
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: 51

A	B	C	D	E	FX
98,04	1,96	0,0	0,0	0,0	0,0

Lecturers: PaedDr. Peter Horváth, PhD.

Last change: 26.11.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UXX-822/15	Teaching Practice in Physics (3)

Educational activities:
Type of activities: practice
Number of hours:
per week: **per level/semester:** 90s
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: 44

A	B	C	D	E	FX
97,73	2,27	0,0	0,0	0,0	0,0

Lecturers: PaedDr. Peter Horváth, PhD.

Last change: 26.11.2021

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-101/15	Theoretical Computer Science (1)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 1.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in class, homework, tests
Exam: written work
Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%

Learning outcomes:
To introduce the issue of theoretical informatics, to acquaint students with classical and current areas of research, in which there are basic questions: Can all problems be solved algorithmically? How effective is the solution? What are the solution techniques?
After completing the course, students will know what a computational model is. On the computational model, the finite state machine (KA) will know what the calculation step is, the calculation, the accepting calculation. They will be able to show (prove) that a specific problem (language recognition) is solvable or. unsolvable at KA. Students will understand the definition of nondeterminism and its use in solving simple problems.
Students will be able to write simple programs for TS.

Class syllabus:
Brief introduction to the main areas of theoretical computer science:
Alphabets, Words, Languages and Algorithmic Problems
finite state machine (KA) calculation, configuration, calculation step, calculation, accepting and non - accepting calculation
Method of KA design: ad hoc and the need for proof of correctness resp. modular design
Existence of problems that are unsolvable at KA. Evidence of non-existence
Nondeterministic finite state machine (NKA), Configuration, calculation step, calculation, accepting and non-accepting calculation.
Equivalence of KA and NKA (subsoil construction)
Introduction to the computational model of the Turing machine

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
65,22	21,74	8,7	4,35	0,0	0,0

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 14.03.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-102/15	Theoretical Computer Science (2)

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 4.

Educational level: II.

Prerequisites: FMFI.KDMFI/2-UIN-101/15 - Theoretical Computer Science (1) or FMFI.KAI +KDMFI/1-AIN-211/10 - Introduction to Theoretical Informatics or FMFI.KI/1-INF-215/14 - Formal Languages and Automata (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 17

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

Lecturers: RNDr. Michal Winczer, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTF/2-UFY-101/15	Theoretical Physics (1)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 2 **per level/semester:** 26 / 26
Form of the course: on-site learning

Number of credits: 5

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: 52

A	B	C	D	E	FX
71,15	11,54	5,77	7,69	1,92	1,92

Lecturers: Mgr. Samuel Kováčik, PhD.

Last change: 15.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTF/2-UFY-102/15	Theoretical Physics (2)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 26 / 13
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: 50

A	B	C	D	E	FX
52,0	24,0	10,0	2,0	12,0	0,0

Lecturers: Mgr. Samuel Kováčik, PhD.

Last change: 15.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KTF/2-UFY-253/15	Theoretical Physics (3)

Educational activities:
Type of activities: lecture / practicals
Number of hours:
per week: 2 / 1 **per level/semester:** 26 / 13
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: 44

A	B	C	D	E	FX
38,64	20,45	15,91	4,55	20,45	0,0

Lecturers: prof. RNDr. Anna Dubničková, DrSc., RNDr. Eduard Masár, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI/2-UIN-266/15	Web Design

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
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	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PaedDr. Roman Hrušecký, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-UIN-247/15	Web Technologies in Teaching

Educational activities:
Type of activities: course
Number of hours:
per week: 2 **per level/semester:** 26
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 3.

Educational level: II.

Prerequisites:

Course requirements:
Continuous assessment: active participation in class (15%), homework (25%), papers (25%), project (35%)
Indicative grading scale: A 90%, B 80%, C 70%, D 60%, E 50%
Scale of assessment (preliminary/final): 100/0

Learning outcomes:
Students will be familiar with different tools based on the latest web technologies, will be able to decide which of these tools are suitable for which learning activities and will be able to suggest different ways of using them in school practice.

Class syllabus:
- new interactive web tools - overview, technological and pedagogical background, relation to learning theories
- blog, vlog, microblog
- collaborative editors and other tools, wikis
- podcasting, social bookmarking and tagging
- social networks
- tools for evaluating activities on the interactive web, peer-review, peer-assessment, self-assessment

Recommended literature:
• The teacher's own electronic study materials published on the course website or in the Moodle system
• Selection of recent publications in the field

Languages necessary to complete the course:
SLovak, English

Notes:

Past grade distribution
Total number of evaluated students: 8

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

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change: 22.06.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-UIN-271/15	Web Technologies in Teaching - Seminar (1)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 7

A	B	C	D	E	FX
85,71	0,0	14,29	0,0	0,0	0,0

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-UIN-272/15	Web Technologies in Teaching - Seminar (2)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 12

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

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-UIN-273/17	Web Technologies in Teaching - Seminar (3)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 2

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

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change:

Approved by:

COURSE DESCRIPTION

Academic year: 2021/2022

University: Comenius University Bratislava

Faculty: Faculty of Mathematics, Physics and Informatics

Course ID:	**Course title:**
FMFI.KDMFI+KAI/2-UIN-274/17	Web Technologies in Teaching - Seminar (4)

Educational activities:
Type of activities: seminar
Number of hours:
per week: 2 **per level/semester:** 26
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: 5

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

Lecturers: doc. RNDr. Zuzana Kubincová, PhD., doc. RNDr. Martin Homola, PhD.

Last change:

Approved by: