Course descriptions

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COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KAlCh/N-bENS-022/15	Analytical Chemistry

Educational activities:
Type of activities: practicals / lecture / seminar
Number of hours:
per week: 2 / 2 / 1 **per level/semester:** 28 / 28 / 14
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:
There will be two running written tests, each for 10 points, during the semester on seminars, in summary maximum 20 points. Only student obtaining from both tests minimum 50% will pass to final exam test. Experimental laboratory work will be graded as follows: continuous compounding will be evaluated by 20 points maximum involving theoretical preparation for laboratory work, activity and quality of results in the experimental work summarized in laboratory protocol. Final test from topics of laboratory will be enabled only to student who submitted protocols from all done laboratory experiments - student can get maximum 20 points, in summary max. 40 points for experimental laboratory work. Only those students will be admitted to final examination who achieve at least 50% of the points from seminar tests and laboratory work evaluation. Final exam related to lecture topics will consist of 40-point test. For clarification of boundary test results it is possible to require additional oral answer to the question for maximum 4 points included. Overall grade will consist of summary evaluation of final exam, seminar tests and experimental work according to formula (0.4 x % final exam) + (0.2 x % seminar tests) + (0.4 x % laboratory work) = resulting %. For grade A, it is necessary to obtain at least 92 %, for grade B at least 84 %, for grade C at least 76 %, for grade D at least 68 % and for grade E at least 60 % of all points. Credits will not be assigned to a student, who will not earn at least 60% from running tests, or who will not earn at least 60% from laboratory work and to student, who will not earn at least 60 % from final exam.

Learning outcomes:
Výsledky vzdelávania (Course objectives):
Chemistry students will become familiar with the information about recent state of quantitative observation - measurement within the system of scientific cognition of material reality; about generation of analytical signal and classification of analytical principles and methods, about analytical process, principles, procedures and techniques; about approach to solution of identification problems, about characterization and quantification of chemical substances in science and technology. Students become familiar also with the possibility to reveal and search for solution of material based research, production and social practice with the aid of chemical analyses as tools of analytical chemistry. The objective involves also calculus in analytical chemistry and solution of model situation from social practice that are discussed in daily press and information media. Student will solve case tasks from biochemistry, biotechnology and the other natural sciences. Current use of analytical chemistry methods and their future potential and outline of their development trends

will be discussed. The objective is taught in three forms. Theoretical aspects and calculus basics are taught in lectures and seminars, respectively. Inevitable part of the objective is also instrumental experimental work in the laboratory.

Class syllabus:

1. Definition, matter of interest and resources of analytical chemistry. History of analytical chemistry in the context with society development. Relations of knowledge – signal – information dealing with fundamental aspects of material world around us. Method of scientific cognition; methodology of scientific work in analytical chemistry; observation, measurement, experiment, hypothesis, theory, correction functions in science. Relations of science and technology from the point-of-view of current possibilities of analytical chemistry. Trace analysis and microanalysis.
2. Measurement. Analytical signal and its properties. Generation of analytical signal. Classification of analytical signals and noise. Comprehensive principles of measurement and evaluation of quality and quantity of chemical substances. Potential and restrictions of measurement and detection analytical methods.
3. Classification of analytical principles according to selectivity, type and properties of analytical signal: qualitative tests and reactions, gravimetry, volumetry. Important chemical concepts, amount and concentration. Importance of quantity, units, measures and mass. International system of quantities (SI). Solutions and concentration. Chemical stoichiometry. Solution of chemical equilibrium. Volumetry - titration. Some general aspects of volumetry. Standard solutions. Calculus. Titration curves. Principles and analytical utilization of neutralization, precipitation, oxidation-reduction, complex forming titrations.
4. Classification of analytical principles according to selectivity, type and properties of analytical signal – electroanalytical methods. Electrogravimetry: weighing of electrochemically deposited substance. Coulometric analytical methods. Voltamperometry. Polarography. Potentiometry: determination of ions and molecules concentration. General principles. Electrodes. Direct potentiometry, pH-metry, ion-selective electrodes. Potentiometric titrations. Conductometry and conductometric detection.
5. Spectroscopic analytical methods, measurement of chemical substances by use of electromagnetic radiation (or light) properties. Interaction of radiation and mater. Atomic absorption spectroscopy. Instrumentation for measurement of light emission or absorption. Atomic emission spectrometers, spectrofluorimeters, UV-VIS photometers, spectrophotometers. Infra-red spectrometers. Analytical utilization of molecular and atomic spectroscopic methods. Analytical molecular fluorescence spectroscopy. Analytical methods based on light scattering by ions and molecules (ELSD, etc). Analytical applications of optical methods.
6. Introduction to analytical separation methods. Classification of separation principles and methods. Masking and demasking reactions. Precipitation and filtration. Separation of volatile substances by distillation. Isolation and separation of substances by extraction. Ion-exchange.
7. Chromatographic separation. Generalised outline of chromatography. Classification of chromatographic methods. Gas chromatography (GC) - principles. Instrumentation of gas chromatography. Carrier gas and auxiliary gas. GC columns and stationary phases. Application of GC for chemical analysis of substances. High-performance liquid chromatography (HPLC). HPLC instrumentation. Separation mechanism: distribution , adsorption, ion-exchange, affinity based LC. Normal phase vs. reversed phase systems. Gel chromatography. Supercritical fluid chromatography (SFC).
8. Electroseparation methods. Capillary electrophoresis vs planar techniques. Instrumentation. Basic principles of electrophoretic methods. Zone electrophoresis, isotachophoresis, isoelectric focusing. Application of capillary electrophoresis in chemical analysis.
9. Mass spectrometry (MS) basic principles. Basic scheme of mass spectrometer. Variables and conditions of measurement by MS. Output signal of MS. MS instrumentation. Basic ionization

techniques in MS. Identification and confirmation of identity. Automation of analytical methods in QC/QA laboratories. Application of combined techniques for solution of selected analytical problems.
10. Automation in analytical laboratories. The combined application of analytical methods to solve selected analytical problems.
11. Practical examples of analytical methods usage in procedures of chemical analysis for solution of actual practical problems I.
12. Practical examples of analytical methods usage in procedures of chemical analysis for solution of actual practical problems II.
13. Practical examples of analytical methods usage in procedures of chemical analysis for solution of actual practical problems III.
14. Final thinking about new trends in analytical chemistry.
Laboratory experiments
1. Volumetric analysis. Determination of ascorbic acid (vitamin C) in fruit juice. Determination of boric acid in eye disinfection instillation (eye drops). Determination of copper in water by kinetic methods (catalytic effect). Manganometric determination of chemical oxygen demand in aqueous samples (waste water).
2. Electrogravimetry. Determination of copper in natural sample. Potentiometric determination of soil acidity.
3. Electrophoretic separation methods. Removal of matrix component excess from sample. Determination of glutamate in food samples. Determination of nitrate and sulphate in tap water by capillary isotachophoresis with conductivity detection.
4. Chromatographic separation methods. Determination of methanol in alcoholic beverage by GC. HPLC-UV determination of aromatic hydroxyl compounds. Separation of water-soluble dyes by paper chromatography.
5. Spectrophotometry. Determination of calcium and sodium in mineral water by flame photometry. AAS determination of manganese in steel samples. Identity confirmation and determination of synthetic food colorant in food by UV spectrophotometry. Spectrophotometric determination of copper in real sample.

Recommended literature:
D. A. Skoog, F. J. West, F. J. Holler, S. R. Crouch: Analytical Chemistry. An Introduction. Saunders Coll. Publ.2000;
G. Schwedt:The Essential Guide to Analytical Chemistry, Wiley, New York, 1997;
R. Kellner, J-M. Mermet, M. Otto, Analytical Chemistry, John Wiley & Sons Australia, Ltd, 2013; Laboratory experiments: guides on www.analytika.sk

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
11,11	11,11	22,22	0,0	44,44	11,11

Lecturers: doc. RNDr. Marian Masár, PhD., Ing. Roman Szücs, PhD., Mgr. Jasna Hradski, PhD.

Last change: 09.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-048/15	Applied Conservation Biology

Educational activities:
Type of activities: practicals / seminar
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 6.

Educational level: I.

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	0,0	0,0	14,29	0,0

Lecturers: RNDr. Jana Ružičková, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-bENS-011/15	Applied Geophysics

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 2., 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 2

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

Lecturers: prof. RNDr. Miroslav Bielik, DrSc., RNDr. Bibiana Brixová, PhD., doc. RNDr. Andrej Mojzeš, PhD., prof. RNDr. Roman Pašteka, PhD., RNDr. René Putiška, PhD., RNDr. Kamil Rozimant, CSc.

Last change: 31.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-027/15	Bachelor Seminar 1

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

Number of credits: 2

Recommended semester: 5.

Educational level: I.

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	14,29	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Marianna Molnárová, PhD., prof. RNDr. Peter Fedor, PhD., prof. RNDr. Vladimír Kováč, CSc., prof. RNDr. Ján Buček, CSc., Mgr. Samuel Rybár, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-030/15	Bachelor Seminar 2

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

Number of credits: 2

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 7

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

Lecturers: doc. RNDr. Marianna Molnárová, PhD., prof. RNDr. Peter Fedor, PhD., prof. RNDr. Ján Buček, CSc., prof. RNDr. Vladimír Kováč, CSc., Mgr. Samuel Rybár, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-031/15	Bachelor Thesis

Educational activities:
Type of activities: seminar
Number of hours:
per week: 10 **per level/semester:** 140
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 6.

Educational level: I.

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	14,29	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Marianna Molnárová, PhD., prof. RNDr. Peter Fedor, PhD., prof. RNDr. Ján Buček, CSc., doc. RNDr. Daniel Pivko, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-047/15	Basic Ecotoxicology

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

Number of credits: 2

Recommended semester: 4.

Educational level: I.

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
14,29	28,57	14,29	28,57	0,0	14,29

Lecturers: prof. RNDr. Agáta Fargašová, DrSc., doc. RNDr. Marianna Molnárová, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-029/15	Biodiversity and Environmental Indicators

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
69,57	17,39	13,04	0,0	0,0	0,0

Lecturers: prof. RNDr. Peter Fedor, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEk/N-bENS-046/15	Biological Invasions

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

Number of credits: 2

Recommended semester: 4.

Educational level: I.

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
14,29	28,57	14,29	14,29	0,0	28,57

Lecturers: prof. RNDr. Vladimír Kováč, CSc., doc. RNDr. Eva Záhorská, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-024/15	Biostatistics

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

Number of credits: 5

Recommended semester: 4.

Educational level: I.

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
20,0	40,0	10,0	0,0	20,0	10,0

Lecturers: doc. RNDr. Marianna Molnárová, PhD., prof. RNDr. Vladimír Kováč, CSc., RNDr. Veronika Candráková Čerňanová, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KBo/N-bENS-002/15	Botany

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 2 / 4 **per level/semester:** 28 / 56
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:
x

Learning outcomes:
x

Class syllabus:
x

Recommended literature:
x

Languages necessary to complete the course:
x

Notes:

Past grade distribution
Total number of evaluated students: 14

A	B	C	D	E	FX
0,0	14,29	7,14	35,71	35,71	7,14

Lecturers: RNDr. Ľubomír Kováčik, CSc., Ing. Mgr. Eva Zahradníková, PhD., prof. RNDr. Karol Mičieta, PhD., doc. RNDr. Jana Ščevková, PhD.

Last change: 06.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-121/19	CLIL 1 – Content and language integrated learning

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

Number of credits: 2

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

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

Lecturers: Mgr. Barbara Kordíková

Last change: 07.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-122/19	CLIL 2 – Content and language integrated learning

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

Number of credits: 2

Recommended semester: 6.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-121/19 - CLIL 1 – Content and language integrated learning

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 5

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

Lecturers: Mgr. Barbara Kordíková

Last change: 07.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF-FMFI.KAFZM/N-bENS-014/15	Climatology

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

Number of credits: 2

Recommended semester: 1., 3.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final written test.
The course has a standardized grading system which is identified below:
A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate); B (84 – 91%): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content; C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course; D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material; E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.

Learning outcomes:
This course offers basic information about general and regional climatology. By the end of this course students should be able to understand the theory of the global climate system and the theory of formation and development of specific climatic patterns in the individual Earth's regions. Students should be able to account environmental problems relating to climate system and to solve some practical problems in contemporary climatology.

Class syllabus:
This course will focus on following topics: The climate system; The Earth´s radiation budget; Energy and temperature; Moisture in the atmosphere; Precipitation; Winds and pressure; The general circulation; Climate classifications and regions; Local climates (the urban climate, the mountain climate, microclimates); Climates of the past; Human interaction with climate; Modelling the climate; Climate change and the future – climate scenarios.

Recommended literature:
Robinson, P. J., Henderson-Sellers, A. 1999. Contemporary Climatology (Second Edition). Harlow: Pearson Education Limited, 317pp. ISBN 0 582 27631 4.

Barry, R. G., Chorley, R. J. 2003. Atmosphere, Weather and Climate (Eight edition). London, New York: Routledge, 421pp. ISBN 0-415-27170-3 (hbk), 0-415-27171-1 (pbk).
Oliver, J.E.(ed): Encyclopedia of World Climatology. Dordrecht: Springer, 2008. 854 pp. ISBN 978-1-4020-3264-6.
The newest information from the INTERNET and journals.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
62,5	37,5	0,0	0,0	0,0	0,0

Lecturers: RNDr. Marián Melo, PhD., doc. RNDr. Martin Gera, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-015/15	Conservation Biology

Educational activities:
Type of activities: seminar
Number of hours:
per week: 6 **per level/semester:** 84
Form of the course: on-site learning

Number of credits: 6

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 36

A	B	C	D	E	FX
91,67	5,56	2,78	0,0	0,0	0,0

Lecturers: RNDr. Mirko Bohuš, PhD., Mgr. Marta Nevřelová, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEGD/N-bENS-017/15	Demography and Population Studies

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 14

A	B	C	D	E	FX
57,14	28,57	0,0	0,0	14,29	0,0

Lecturers: prof. RNDr. Branislav Bleha, PhD., Mgr. Juraj Majo, PhD.

Last change: 04.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEk/N-bENS-008/15	Ecology

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 4 / 2 **per level/semester:** 56 / 28
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 28

A	B	C	D	E	FX
21,43	17,86	32,14	14,29	14,29	0,0

Lecturers: prof. RNDr. Vladimír Kováč, CSc., doc. RNDr. Eva Záhorská, PhD.

Last change: 27.11.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEGD/N-bENS-023/15	Economic and Social Geography

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

Number of credits: 5

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:
Students elaborate a project (based on scientific literature) that will be submitted and presented, as a necessary precondition to complete the course. The project´s weight for the final assessment of the course is 30%. The final examination (written form) will include an essay and a test with open questions. The examination´s weight is 70%. The written examination must score 60-66% of the maximum points to gain E grade, 67–74% for D grade, 75-82% for C, 83-90% for B and at least 91% for A.

Learning outcomes:
The course is focused on basic issues of economic and social geography. It develops students´ knowledge on principal issues of economic geography, with a special focus on global processes and their impact on economic activities. The course will introduce basic concepts and approaches in economic geography and stimulate students to understand global economic inequalities. It will reveal relationship between economic and social inequalities and space in different geographical scale, its explanation and seeking of relationship. Students will adopt the knowledge how inequalities are constructed within society and how they relate with space (from microspace of household, neighborhood, city, region...). Within social geography will subject focused on class, gender and race/ethnicity, espacially in the context of transitive society and postsocialism.
The aim of the course is not only present and sumarize new information for students from the field of Economic and Social geography, but also to stimulate verbal communication and critical thinking of students.

Class syllabus:
Introduction to economic geography. Essential principles and theories in economic geography, factors of production, central place theory, role of market, core-periphery theories of economic development, effects of agglomeration, etc.
Globalising economy, globalisation in production and services, role of ICT. Transportation networks, mobility turn, virtual mobility.
Formation of global cities, mega-cities. Knowledge economies, transition economies, geography of emerging markets. Case studies: upgrading industries as driving forces in central European transition economies.

Class and space. Geography of poverty, socio-spatial inequalities in different geographical scale. Social inequalities in the city - ghetto, segregation, gated communities in the city.
Gender in space. Feminisation of poverty, gender inequalities in Slovakia in the context of different historical and regional context;
Race, ethnicity and space. Patterns of interaction majority/minority within Slovak society, segregation and poverty of Roma population.
Spaces of postsocialism. Socialism, transformation, neoliberalism and its impact on society, regional specifics and strategies in household economy and social reproduction.

Recommended literature:

Pain, R. et al. 2001. Introducing social geographies. Arnold publishers. New York.
Gill Valentine. 2001. Social Geographies: Space and Society. Pearson Education Ltd, England.
Stenning, A., Smith, A., Rochovská, A., Swiatek, D. (2010): Domesticating neo-liberalism. Spaces of economic practice and social reproduction in post-socialist cities. Wiley-Blackwell.
Knox, P. (2009): Urban Social Geography. Longman Group Limited. Essex, England.
Clark, G., Gertler, M. and Feldman, M.(eds) (2003) The Oxford Handbook of Economic Geography, Oxford: Oxford University Press
Coe, N., Kelly, P., and Yeung, H. (2007) Economic Geography: A Contemporary Introduction, London: John Wiley & Sons
Barnes, T. J., Gertler, M. S. (eds.) 2011. The New Industrial Geography. Regions, regulation and institutions. Routledge, Abingdon.
Daniels, P., Bradshaw, M., Shaw, D., Sidaway, J. (eds) 2005. An Introduction to Human Geography. Issues for the 21st century. Pearson Education, Harlow

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 25

A	B	C	D	E	FX
24,0	32,0	20,0	16,0	0,0	8,0

Lecturers: doc. Mgr. Marcel Horňák, PhD., prof. RNDr. Pavol Korec, CSc., Mgr. Alena Rochovská, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-070/10	English 1

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

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-120/19 - Foreign language placement test

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 3934

A	B	C	D	E	FX
44,05	25,75	16,14	7,93	4,55	1,58

Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo

Last change: 07.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-071/10	English 2

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

Number of credits: 3

Recommended semester: 4., 6.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 3673

A	B	C	D	E	FX
52,82	23,63	14,27	5,23	3,24	0,82

Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo

Last change: 07.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-086/10	English 3

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

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1,PriF.KJ/N-bXCJ-071/10 - English 2 and leboPriF.KJ/N-bXCJ-114/16 - English language for Chemistry students (2),PriF.KJ/N-bXCJ-113/16 - English language for Chemistry students (1)

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 547

A	B	C	D	E	FX
63,62	23,95	7,86	2,56	1,1	0,91

Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-087/10	English 4

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

Number of credits: 2

Recommended semester: 4., 6.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1,PriF.KJ/N-bXCJ-071/10 - English 2

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 327

A	B	C	D	E	FX
71,87	20,8	6,12	0,61	0,31	0,31

Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-118/18	English language 3 - preparation course for UNIcert

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

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1,PriF.KJ/N-bXCJ-071/10 - English 2

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 81

A	B	C	D	E	FX
65,43	32,1	0,0	2,47	0,0	0,0

Lecturers: Mgr. Barbara Kordíková, PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., RNDr. Tatiana Slováková, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-119/18	English language 4 - preparation course for UNIcert

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

Number of credits: 2

Recommended semester: 4., 6.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-118/18 - English language 3 - preparation course for UNIcert

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 68

A	B	C	D	E	FX
85,29	11,76	0,0	0,0	0,0	2,94

Lecturers: Mgr. Barbara Kordíková, Mgr. Aneta Barnes

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-037/15	Environmental Assessment

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 1 **per level/semester:** 28 / 14
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 15

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

Lecturers: doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-028/15	Environmental Chemistry

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

Number of credits: 4

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 13

A	B	C	D	E	FX
30,77	30,77	15,38	15,38	7,69	0,0

Lecturers: prof. Ing. Eva Chmielewská, CSc.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KGCh/N-bENS-025/15	**Course title:** Environmental Geochemistry
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 1 / 2 **per level/semester:** 14 / 28 **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 4.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final written exam. The course has the following grading system: A (85 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (75 – 84 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content. C (70 – 74%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (65 – 69%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 64%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: The subject explains the most significant environmental problems caused by anthropogenic activities that affect the environment, including human beings. Students successfully graduating the course will understand: 1) causes of generation of selected problems concerning the contamination of the environment; 2) their consequences on individual compartments of the environment and 3) controls on their reduction and mitigation of their environmental impacts. The subject includes an exercise, which is focused on the application of physico–chemical theories to the quantification of some bio–geochemical processes occurring in the environment and on the statistical and graphical evaluation of the measured data.	
Class syllabus: Introduction to environmental geochemistry – definition, content, history, significance for human society, environmental contamination, types of pollutants, case–studies of environmental contamination from world and Slovakia. Global cycle of carbon and its role in climate – carbon exchange among the earth reservoirs, impact of humans on carbon cycle, carbon cycle is changing, enhanced greenhouse effect and its origin, radiative forcing, feedbacks, temperature variability through the Earth geological history, climatic change, regulation of greenhouse gases. Ozone layer over the Earth – ozone as a protector of life and its distribution in the earth	

atmosphere, ozone formation and break–down in the stratosphere, catalytic destruction of ozone in the stratosphere and compounds damaging the stratospheric ozone layer, ozone hole over Antarctic and Arctic, consequences for the environment, control measures for the protection of the ozone layer. Pollution of the troposphere I: Photochemical smog and classical smog – how are they formed?, sources of VOC, NOx and SOx emissions, harmful effects of smog, air pollution monitoring in Slovakia. Pollution of the troposphere II: Acid deposition and acid rain – global biogeochemical cycles of sulphur and nitrogen, precursors of acid deposition and their transformation to inorganic acids, pH of rain, impacts of acid deposition on the environment and humans, regulatory measures of acid deposition. Cultural eutrophication – causes of eutrophication, indicators of eutrophication, classification of waters according to the trophic status, algae and cyanobacteria blooms, effects of eutrophication on aquatic ecosystems, controls on eutrophication. Radioactivity in the environment – history of the radioactivity, unstable isotopes of chemical elements (radionuclides), types of radioactive transformations, units of radioactive radiation, sources of radionuclides in the environment, relationship dose–response, natural radioactivity and radon risk. Synthetic organic compounds I: Pesticides – definition and their classification according to the different criteria, examples of pesticides, effects of pesticide residues on the environment, main processes affecting the environmental fate of pesticides (volatilization, sorption, abiotic and biological transformation, bioaccumulation and biomagnification). Synthetic organic compounds II: Persistent organic pollutants – Stockholm convention, sources in the environment and global distribution, adverse effects on the environment (endocrine disruptors and other effects), their physical, chemical and biological properties. Potentially toxic elements – definition, sources in the environment, esenciality, harmful effects on humans, geochemical processes in soils and waters and their significance for transfer to food–chain. Remediation methods of environmental matrices (soils and waters) – remediation methods „in situ“ and „ex situ“ (biological methods #natural and controlled attenuation, phytoremediation, bioextraction, bioreactors, biosparging and bioslurping, composting, biostabilization and bioimmobilization#; physico–chemical methods #chemical oxidation, electrochemical remediation, leaching, solidification and stabilization, sealing barriers and incapsulation, thermal methods, adsorption, ion exchange, precipitation, coagulation, etc.).

Recommended literature:

Pepper I.L., Gerba C.P., Brusseau M.L., 2006. Environmental and Pollution Science. 2nd edition. Elsevier, Amsterdam, 532 s. (ISBN 978-0-12-551-503-0).

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 14

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

Lecturers: prof. RNDr. Edgar Hiller, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-049/15	Environmental Monitoring

Educational activities:
Type of activities: practicals / seminar
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
50,0	25,0	0,0	12,5	0,0	12,5

Lecturers: RNDr. Martina Zvaríková, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-036/15	Environmental Planning and Management

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 3 / 1 **per level/semester:** 42 / 14
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 41

A	B	C	D	E	FX
68,29	14,63	14,63	2,44	0,0	0,0

Lecturers: doc. RNDr. Katarína Pavličková, CSc., RNDr. Božena Šerá, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KBo/N-bENS-010/15	Excursion in Botany and Zoology

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

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:
x

Learning outcomes:
x

Class syllabus:
x

Recommended literature:
x

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 23

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

Lecturers: RNDr. Ľubomír Kováčik, CSc., Ing. Mgr. Eva Zahradníková, PhD., RNDr. Peter Degma, CSc., doc. Mgr. Peter Mikulíček, PhD.

Last change: 06.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KGP/N-bENS-020/15	**Course title:** Excursion in Geology
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 1t **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 3.	
Educational level: I.	
Prerequisites:	
Course requirements: Active participation in field practice. Presentation of Field Notebook with documentation of the individual localities. Passing a written review. A (91 – 100%): Outstanding, excellent work; B (81 – 90 %): Good, competent work; C (73 – 80): Adequate, reasonably satisfactory work; D (66 – 72%): Less acceptable work; E (60 – 65%): Minimally acceptable work;. Fx (under 60%): Inadequate work;	
Learning outcomes: Practical demonstration of the most important exogene and endogene geological processes in Slovakia and their documentation. Fundamentals of field research, study and documentation of outcrops, practical identification of rocks, minerals and fossils, their investigation and sampling of data for laboratory processing.	
Class syllabus: Within the field practice, students are familiarized with the geological manifestations of endogene and exogene geological processes. With basic geological phenomenon forms, rocks, minerals and fossils. Specifically, to meet with a genetically and age different rocks and form their expression, conservation and origin as well as their fossil content and their different resistance to weathering. Presented are the attributes of geological and derived geological maps and their interpretation. At selected locations will have students the opportunity to gain practical experience with the documentation and collection of data necessary for the interpretation of the creation, operation and effects of endogene and exogene geological factors.	
Recommended literature: Plummer Ch.C., McGeary D. & Carlson D.H. 2004: Physical Geology. McGraw Hill Higher Education, Boston, 540 pp.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution
Total number of evaluated students: 20

A	B	C	D	E	FX
90,0	0,0	0,0	0,0	0,0	10,0

Lecturers: doc. RNDr. Jozef Hók, CSc.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-bENS-042/15	**Course title:** Exploration, Mining, Drilling
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 6.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: The aim of the course is to provide fundamental information about exploration, mining and drilling, methods of prospecting, underground works, sampling, documentation, evaluation and visualization.	
Class syllabus: Requirements for mining works. Methods of prospecting: geological, mineralogical and geochemical. Geophysical investigation methods. Parameters and methods of mineral resources calculation. Subsurface workings - shafts, mine adits, inlined shafts, chutes, trial pits, boreholes. Requirements for geological works. Sampling, geological documentation, laboratory works. Surface workings - quarries, surface stopes, prospecting pits, furrows, boreholes. Drilling engineering - fundamental drilling methods, fundamental parameters and drilling rigs components. Shallow drilling investigation works - engineering, hydrogeological, dewatering. Deep drilling investigation works - structural, geothermal, oil prospection. Design, management and evaluation of drilling works.	
Recommended literature:	

Roger Marjoribanks: Geological methods in mineral exploration & mining, Chapman & Hall 1997.
William C. Peters: Exploration and mining geology, John Wiley & Sons, 2 edition, 1987.
Misstear B et al.: Water wells and Boreholes. John Wiley and Sons Ltd, West Sussex, England, 2006.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers: doc. RNDr. Martin Bednarik, PhD., doc. Mgr. Peter Šottník, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-120/19	Foreign language placement test

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

Number of credits: 1

Recommended semester: 1., 2..

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 822

A	B	C	D	E	FX
99,64	0,0	0,0	0,0	0,24	0,12

Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Barbara Kordíková, PhDr. Oľga Pažitková, CSc., Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová, RNDr. Tatiana Slováková, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KAgCh/N-bENS-002/19	General and Inorganic Chemistry

Educational activities:
Type of activities: practicals / lecture / seminar
Number of hours:
per week: 2 / 4 / 2 **per level/semester:** 28 / 56 / 28
Form of the course: on-site learning

Number of credits: 9

Recommended semester: 1.

Educational level: I.

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
33,33	0,0	33,33	33,33	0,0	0,0

Lecturers: prof. RNDr. Jozef Noga, DrSc.

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KGCh/N-bENS-050/15	**Course title:** Geochemistry of Natural Waters

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

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final exam discussion (contributing 75%) and written evaluation of a practical task (25%). The course has a standardized grading system which is identified below:
A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.

Learning outcomes:
This course covers the background and skills needed to understand basic chemical, physico-chemical and geochemical processes influencincg the chemiccal composition of natural waters. By the end of this course students should be able to:
• To identify basic genetic types of water and understand what processes are forming their composition..
• Understand processes of rock – water and gas phase – water interactions.
• To identify origin of main antropogenic, as well as natural chemical components in natural water
• Understand the fate and transport of pollutants in natural waters
• Apply basic methods of water analyses evaluation

Class syllabus:
Introduction to the geochemistry of natural waters; Water as a chemical compound, its physical-chemical properties; The hydrological cycle; Chemical reactions in natural waters; Equilibria of chemical reactions; Acido-basic systems; Dissolution of minerals, organic compounds and gases; Oxidation-reduction reactions; Principles of oxidation and reduction; Redox diagrams; Sequention of oxidation-reduction reactions in natural waters; Sorption and ion-exchange; Physical

sorption, surface charge; Chemical sorption, inner sphere complexes; Models of sorption processes; Sorption by organic matter, hydrophobic bonds; Ion-exchange processes; Types of sorbents and ion-exchangers; Soil cover and chemical composition of natural waters; Formation and role of CO2 Overview of geochemical processes occuring within the soil cover influencing the chemical composition of the natural waters; Dissolution of carbonate minerals; The role of CO2
Closed system dissolution of carbonate minerals; Open system dissolution of carbonate minerals; Dissolution od alumosilicate minerals, mixed environments; Incongruent dissolution of alumosilicate minerals; Mixed environment, inverse models of mineral dissolution; Classification of litogenic meteoric waters of the Wester Carpathians;
Geochemistry of surface waters; Geochemistry of terrestrial surface waters
Marine geochemistry; Influence of evaporation on the chemical composition of natural waters; Systematic geochemistry of natural waters; Main components of natural waters – sources and chemical transformations; Organic compounds in natural waters – antropogenic and natural; Isotope geochemistry of natural waters; Stable isotopes of H, O, C, S and N; Radioactive isotopes in natural waters; Transport of pollutants in groundwater; Advection - dispersion transport and its components; Influence of chemical reactions on transport of pollutants in the groundwater; Field research in geochemistry of natural waters ; Water sampling methods; Sample conservation; Field measurments.

Recommended literature:

Appelo, C. A. J., Postma, D. (2005): Geochemistry, Groundwater and Pollution. CRC Press, 668 ss.
Stumm, W., Morgan, J. J., (1996): Aquatic Chemistry: Chemical Equilibria and Rates in Natural Waters, J. Wiley and Sons, 1005 pp.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 6

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

Lecturers: Mgr. Tomáš Lánczos, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFGGI/N-bENS-040/15	**Course title:** Geoecology
Educational activities: **Type of activities:** seminar **Number of hours:** **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 4.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content. C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: The course covers the background and skills needed to understand and apply geoecological approach in landscape assessment. Graduates will become familiar with the theoretical base of Geoecology and will obtain information of basic and applied methods in geoecological research. Due to independent work students will apply their theoretical knowledge of the procedures applied in the geoecological research. The student will be able to implement basic methods of geoecological research and synthesis of the components of physical geographic sphere in a comprehensive assessment of the landscape.	
Class syllabus: • Introduction to the Study of Geoecology. Object and subject of Geography and Geoecology. Landscape sphere of the Earth, its borders. Landscape. Origin and evolution of Geoecology, its position in the system of sciences. • Introduction to the theory of geosystems. Landscape (geographical) sphere as a system. Physical geographical complex – natural geosystem. • Geographic dimensions I.	

• Geographic dimensions II. Paradynamic complexes and catenas.
• Changes in natural terrestrial complexes in the area – patterns of spatial differentiation. Zonality.
• Changes in natural terrestrial complexes at the time – processes, development.
• Geoecological research methods. Classification methods. Basics of the physical-geographical regionalization.
• Geoecological mapping.
• Modelling in Geoecology. Geographic information. Use of GIS.
• Methodology of landscape applied research. Methodology of landscape synthesis.
11. Methodology of evaluation of landscape potential.

Recommended literature:

Farina, A.: Principles and Methods in Landscape Ecology. Dordrecht: Springer, 2006. 412 pp.
Huggett, R. J.: Geoecology. London: Routledge, 1995. 320 pp.

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 6

A	B	C	D	E	FX
16,67	0,0	0,0	50,0	33,33	0,0

Lecturers: doc. Igor Matečný, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KRGRR/N-bENS-005/15	Geography

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final written test. Completion of semestral essey is obligatory before progressing to final exam.
The course has a standardized grading system which is identified below:
A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate); B (84 – 91%): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content; C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course; D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material; E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.

Learning outcomes:
After completion of the course, students are able to:
Identify the object and subject of geography, position of geography in the system of sciences and its breakdown, the development of geography in different historical periods, basic sources of geographic information.
Mastering basic geographical concepts and knowledge in the areas of: planetary geography, cartography, positioning on Earth, time, geology, geomorphology, hydrospere, atmosphere, pedosphere, biosphere, population, settlements, economy, regions and countries of the Earth.

Class syllabus:
Metageographical basics of the object of Geography (lithosphere, pedosphere, troposphere, hydrosphere, biosphere, relief, human geography), binding domain, place of geography in the system of sciences
• Development of geographic thinking
• Basic knowledge / concepts, theories / - Planetary geography.
• Basic knowledge / concepts, theories / - Cartography

• Basic knowledge / concepts, theories / - Geomorphology
• Basic knowledge / concepts, theories / - Hydrology, climatology
• Basic knowledge / concepts, theories / - Pedogeography, biogeography
• Basic knowledge / concepts, theories / - Population and settlements
• Basic knowledge / concepts, theories / - Economy
• Basic knowledge / concepts, theories / - Regions and countries of the Earth

Recommended literature:
JAMES, E. P.: All possible worlds. The Bobbs-Meril co. New York, 1972.
ALLABY, M. et all 2008. The Encyclopedia of Earth, Weldon Owen Pty Ltd, Sydney2008

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
85,71	9,52	0,0	4,76	0,0	0,0

Lecturers: doc. RNDr. František Križan, PhD., prof. RNDr. Ladislav Tolmáči, PhD., Mgr. Gabriel Zubriczký, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-bENS-044/15	**Course title:** Geohazard Mitigation

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

Number of credits: 5

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below:
In the course of semester is continous compouding in the form of test (contributing 5%, exercises (contributing 30%), final test (contributing 65%).
A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (84 – 91 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.

Learning outcomes:
The aim of the course is to provide a concentrated knowledge on socio-economic significance of geohazards. The most frequent geohazards and their consequences. Factors, identification and prediction of geohazards, remedial measures. Landslide hazard maps.

Class syllabus:
Socio-economic significance of geohazards, terminology. The most frequent geohazards and their classification. Recent tectonics and earthquakes, earthquake forecasting, risk mitigation. Volcanic activity, prediction of volcanic activity, risk mitigation. Slope movements and the causes of their generation. Landslide prevention and remedial measures. River and wind erosion, floods, river and erosion control. Piping, liquefaction, dissolution of rocks, prevention and remediation. Coastal processes (abrasion) and coastal protection. Volume changes in expansive soils, collapse in loess, remediation and corrective measures.. Ground subsidence and roof collapse of cavities, remedial measures. Evaluation and interpretation of geohazards in various hazard maps, GIS tools in hazard mapping.

Recommended literature:
F.G. Bell, 2007: Basic Environmental and Engineering Geology (selected chapters) Whitles Publishing Limited

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 17

A	B	C	D	E	FX
11,76	23,53	23,53	29,41	11,76	0,0

Lecturers: doc. RNDr. Renáta Adamcová, PhD., Mgr. Rudolf Tornyai, PhD.

Last change: 02.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFGGI/N-bENS-051/15	Geoinformatics and GIS

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

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 14

A	B	C	D	E	FX
28,57	42,86	21,43	0,0	0,0	7,14

Lecturers: doc. RNDr. Eva Mičietová, CSc., Mgr. Hana Bobáľová, PhD.

Last change: 02.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KGP/N-bENS-003/15	**Course title:** Geology 1
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 1 / 2 **per level/semester:** 14 / 28 **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 1.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content. C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: Essential knowledge of Earth as a planet, geospheres, crust, lithosphere. Energy and mass transpost in geological processes, minerals, rocks and processes of their formation. Magmatism, volcanism, sedimentation and metamorphism. Time and historical context in geology. Exogenous processes - weathering, soil mass transpostation on slopes.	
Class syllabus: Introduction to Physical Geology. Earth in Space. The Earths Interior. Energy of geological processes. Chemical and mineralogical composition of the earth crust. Magmatism. Volcanism and extrusive rocks. Sedimentation – origin of sediments. Metamorphism. Time and Geology. Weathering, soils and morphology. Landscapes.	
Recommended literature: Plummer Ch.C., McGeary D. & Carlson D.H. 2004: Physical Geology. McGraw Hill Higher Education, Boston, 540 pp.	
Languages necessary to complete the course: English	

Notes:

Past grade distribution
Total number of evaluated students: 16

A	B	C	D	E	FX
37,5	6,25	25,0	18,75	12,5	0,0

Lecturers: doc. RNDr. Jozef Hók, CSc., Mgr. Samuel Rybár, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KGP/N-bENS-007/15	**Course title:** Geology 2
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 1 / 2 **per level/semester:** 14 / 28 **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 2.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content. C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: Exogene processes - geological activity of water and wind. Rock deformation and deformation structures. Earthquakes and tectonics of lithospheric plates.	
Class syllabus: Precipitation and morphology. Ground water. Karst Geology. Rivers. Lakes. Waves, Beaches and Coasts. Glaciers and glaciation. Deserts and wind action. Geological structures. Earthquakes. Plate tectonics. Orogenesis and Mountains belts.	
Recommended literature: Plummer Ch.C., McGeary D. & Carlson D.H. 2004: Physical Geology. McGraw Hill Higher Education, Boston, 540 pp.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 16					
A	B	C	D	E	FX
50,0	18,75	18,75	6,25	6,25	0,0
Lecturers: doc. RNDr. Jozef Hók, CSc., Mgr. Samuel Rybár, PhD.					
Last change: 14.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-072/10	German 1

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

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-120/19 - Foreign language placement test

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 577

A	B	C	D	E	FX
21,32	19,93	26,0	17,33	11,79	3,64

Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová

Last change: 21.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-073/10	German 2

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

Number of credits: 3

Recommended semester: 4., 6.

Educational level: I.

Prerequisites: PriF.KJ/N-bXCJ-072/10 - German 1

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 564

A	B	C	D	E	FX
25,35	21,45	26,24	16,49	6,91	3,55

Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová

Last change: 21.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-096/10	German 3

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

Number of credits: 2

Recommended semester: 3., 5.

Educational level: I.

Prerequisites:

Course requirements:

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
87,91	7,69	2,2	0,0	1,1	1,1

Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová

Last change: 15.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-097/10	German 4

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

Number of credits: 2

Recommended semester: 4., 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 66

A	B	C	D	E	FX
87,88	10,61	1,52	0,0	0,0	0,0

Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová

Last change: 21.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-004/15	Global Environmental Problems

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

Number of credits: 4

Recommended semester: 1.

Educational level: I.

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
76,0	16,0	4,0	2,0	0,0	2,0

Lecturers: Mgr. Slavomír Čerňanský, PhD., doc. RNDr. Marianna Molnárová, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KPl/N-bEXX-116/19	Globálne problémy životného prostredia

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

Number of credits: 3

Recommended semester: 2., 4., 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 327

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

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

Last change: 18.09.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bXXX-001/19	Green University 1

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

Number of credits: 2

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

Educational level: I.

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

Last change: 11.02.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bXXX-002/19	Green University 2

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

Number of credits: 2

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

Educational level: I.

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

Last change: 11.02.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-bENS-018/15	Hydrogeology

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
26,32	26,32	15,79	10,53	21,05	0,0

Lecturers: doc. RNDr. Dávid Krčmář, PhD., RNDr. Ivana Ondrejková, PhD.

Last change: 19.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-bENS-021/15	**Course title:** Hydrology and Hydroclimatology
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 1 / 2 **per level/semester:** 14 / 28 **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 5.	
Educational level: I.	
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
41,67	33,33	25,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Dávid Krčmář, PhD., RNDr. Ivana Ondrejková, PhD.
Last change: 19.12.2019
Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KDPP/N-bXDI-004/10	Introduction to Philosophy (1)

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

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:
participation, activity, homework or final essay

Learning outcomes:
Understanding of the basic concepts of systematic philosophy and the basic traditions of the history of philosophy.

Class syllabus:
Introduction of the basic concepts of philosophy. A review of the history of philosophy. The emergence of philosophy in antique Greece and its development. Plato and Aristotle. Chosen problems of systematic philosophy.

Recommended literature:
Tarnas, R.: The Passion of the Western Mind
Anzenbacher, A.: Introduction to Philosophy

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 1668

A	B	C	D	E	FX
50,48	35,97	13,01	0,36	0,18	0,0

Lecturers: Mgr. Štefan Zolcer, PhD.

Last change: 19.09.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KDPP/N-bXDI-005/10	Introduction to Philosophy (2)

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

Number of credits: 3

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:
participation, activity, homework or final essay

Learning outcomes:
Understanding of the basic concepts of systematic philosophy and the basic traditions of the history of philosophy.

Class syllabus:
Introduction of the basic concepts of philosophy. A review of the history of philosophy. Reflections on the beginnings of modern scientific and philosophical thinking in early modern times and the development of modern philosophy. Chosen problems of systematic philosophy.

Recommended literature:
Tarnas, R.: The Passion of the Western Mind
Anzenbacher, A.: Introduction to Philosophy
Kuhn, T. S.: The Structure of Scientific Revolutions
Rosenberg, A.: Philosophy of Science. A contemporary introduction

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 1352

A	B	C	D	E	FX
49,85	33,14	16,12	0,37	0,44	0,07

Lecturers: Mgr. Štefan Zolcer, PhD.

Last change: 19.09.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KMPLG/N-bENS-041/15	Landuse Planning Management

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

Number of credits: 3

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below:
A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (84 – 91 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter

Learning outcomes:
The aim of the course is to provide a concentrated knowledge on land use planning management in relation to sustainable development of the area. Rational use of mineral resources incl. groundwater. Impacts of economic activity on land development, monitoring of anthropogeneous geological processes and reduction of their negative action on the environment.

Class syllabus:
Land use vs. commercial reality. Principles of landuse planning process in Slovakia. Mineral resources management. Economic minerals. Construction resources. Water resources occurrence, evaluation and management. Threats for groundwater quantity and quality. Basic principles of groundwater protection. Mapping for planning development. Thematic maps. Geohazards and risk maps.GIS derived maps for planning purposes. Waste management. Maps for waste disposal site location. Water site investigation and site operation. Sludge, mine tailing, ash –fly repositories, radioactive waste. Environmental monitoring (rocks and soils). Environmental monitoring (water, agricultural soil). Environmental Impact Assessment (EIA).

Recommended literature:

F.G. Bell: Basic Environmental and Engineering Geology (selected chapters). Whitles Publishing Limited,
J.F. Artiola, I.L.Pepper, M. Brusseau: Environmental Monitoring and Characterization. Publ. Elsevier

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 11

A	B	C	D	E	FX
9,09	18,18	0,0	18,18	54,55	0,0

Lecturers: doc. RNDr. Renáta Adamcová, PhD., prof. RNDr. Otília Lintnerová, CSc., RNDr. Ivana Ondrejková, PhD., doc. Mgr. Vladimír Greif, PhD.

Last change: 02.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-094/10	Latin

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

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 464

A	B	C	D	E	FX
42,24	20,69	13,36	5,17	6,25	12,28

Lecturers: PhDr. Štefánia Dugovičová, PhD., Mgr. Ivan Lábaj, PhD.

Last change: 16.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-095/10	Latin

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

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 355

A	B	C	D	E	FX
49,58	20,28	10,99	3,94	3,1	12,11

Lecturers: PhDr. Štefánia Dugovičová, PhD., Mgr. Ivan Lábaj, PhD.

Last change: 16.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEGD/N-bENS-045/15	Local Development, Urban Economics and Public Finance

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 6.

Educational level: I.

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
58,33	16,67	0,0	8,33	0,0	16,67

Lecturers: prof. RNDr. Ján Buček, CSc., RNDr. Martin Plešivčák, PhD.

Last change: 09.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-bENS-043/15	**Course title:** Methods of Engineering Geological Investigation
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 1 / 2 **per level/semester:** 14 / 28 **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 6.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final test (contributing 100%). The course has a standardized grading system which is identified below: A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (84 – 91 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter	
Learning outcomes: The course concentrates on field methods of engineering geological investigation at the bachelor level. It should help to distinguish difference between regional engineering geological investigation and site investigation, and to select appropriate/corresponding field investigation methods and tools, from mapping to field tests.	
Class syllabus: Introduction, factors influencing the selection of investigation methods, difference between regional engineering geological investigation and site investigation. Engineering geological maps. Definitions, classification, basic principles of geologic data interpretation in different map types. Geoenvironmental maps. Definitions, classification, basic principles of geologic data interpretation in different map types. Preparations for mapping, preliminary data acquisition and retrieval – data sources, database. Field reconnaissance and observation of geologic phenomena. Visual field identification, description and sampling of rocks and soils according to technical standards. Preparation of engineering geological maps and application of GIS tools in engineering geological mapping. Geophysical exploration for engineering geological investigation. Subsurface investigations: major uses in engineering geology, location, boring and sampling methods overview.	

Principles of site mapping. Selected express/low cost field test methods. Detailed site investigation – overview of field tests and the role of the engineering geologist.

Recommended literature:
F.G. Bell, 2007: Basic Environmental and Engineering Geology (selected chapters) Whitles Publishing Limited
Handouts distributed by the teacher

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers: doc. RNDr. Renáta Adamcová, PhD.

Last change: 02.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-bENS-033/15	Monitoring of Natural and Sewage Waters Quality

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 15

A	B	C	D	E	FX
33,33	26,67	20,0	6,67	6,67	6,67

Lecturers: RNDr. Ivana Ondrejková, PhD., doc. RNDr. Renáta Fľaková, PhD.

Last change: 05.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFGGI/N-bENS-039/15	Natural Hazards and Risks

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 2 **per level/semester:** 14 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:
Grades will be based on the final written test (80% of evaluation) and completion of semestral work (20% of evaluation).
The course has a standardized grading system which is identified below:
A (92 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate); B (84 – 91%): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content; C (76 – 83%): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course; D (68 – 75%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material; E (60 – 67%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.

Learning outcomes:
The course offers an introduction into problems of natural hazards and risks influencing human activities in the landscape and their evaluation. It covers the background and skills needed to understand and analyse nature of natural processes threatening to humans. Students will master simple algorithms of space natural hazards evaluation.

Class syllabus:
The course will focus on following topics:
- Definition of basic terminology (disaster, hazard, risk, susceptibility, vulnerability). Overview of types of hazards and risks.
- Volcanic hazard and its evaluation.
- Seismic hazard and its evaluation.
- Hazards of waterlogging and wind erosion and theirs evaluation.
- Hazard of water soil erosion and its evaluation.
- Hazard of landslide and its evaluation.
- Hazard of flooding and its evaluation.

- Hazard of snow avalanche and its evaluation.
- Natural disasters in the Earth history and temporary climatic change.
- Whirlwinds and risks of human activities in threatened regions.
- Natural hazards and risks in Slovakia

Recommended literature:

HYNDMAN, D., HYNDMAN, D.: Natural Hazards and Disasters. 2nd edition. Belmont: Brooks/Cole Cengage Learning, 2009. ISBN-13: 978-0-495-31667-1.
McGUIRE, B., BURTON, P., KILBURN, Ch., WILLETTS, O.: World Atlas of Natural Hazards. London: Arnold, 2004. ISBN 0-340-76405-8.
TREMBOŠ, P., MINÁR, J., MACHOVÁ, Z.: Identification of selected natural hazards from the standpoint of evaluation of environmental limits. In: Acta fac. rer. natur. Univ. Comen., Geographica No. 34. Bratislava: Univ. Komenského, 1994, p. 135-152. ISBN 80-223-0827-7.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 18

A	B	C	D	E	FX
27,78	22,22	22,22	16,67	11,11	0,0

Lecturers: prof. RNDr. Jozef Minár, CSc., doc. Ing. Peter Pišút, PhD.

Last change: 14.01.2020

Approved by:

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KEM/N-bOBH-101/17	**Course title:** Obhajoba bakalárskej práce
Number of credits: 8	
Educational level: I.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KOrCh/N-bENS-009/15	Organic Chemistry

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

Number of credits: 6

Recommended semester: 2.

Educational level: I.

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
25,0	8,33	8,33	8,33	25,0	25,0

Lecturers: doc. RNDr. Andrej Boháč, CSc., Mgr. Andrea Martinická, PhD., RNDr. Pavol Tisovský, PhD.

Last change: 27.11.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-104/18	Physical Education

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

Number of credits: 1

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 316

A	B	C	D	E	FX
99,37	0,0	0,63	0,0	0,0	0,0

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-101/18	Physical Education 1

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

Number of credits: 1

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 858

A	B	C	D	E	FX
99,07	0,7	0,0	0,0	0,0	0,23

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-102/18	Physical Education 2

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

Number of credits: 1

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 561

A	B	C	D	E	FX
99,82	0,0	0,0	0,0	0,0	0,18

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-103/18	Physical Education 3

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

Number of credits: 1

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 369

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

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-105/18	Physical Education 5

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

Number of credits: 1

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 230

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

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bXTV-106/18	Physical Education 6

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

Number of credits: 1

Recommended semester: 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 178

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

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

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-026/15	Practical Training

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

Number of credits: 6

Recommended semester: 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 13

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

Lecturers: prof. RNDr. Ján Buček, CSc., prof. RNDr. Peter Fedor, PhD., doc. RNDr. Jozef Hók, CSc., RNDr. Mirko Bohuš, PhD., doc. RNDr. Marianna Molnárová, PhD.

Last change: 29.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-bGXX-002/19	Practice-oriented geology for all

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

Number of credits: 3

Recommended semester: 2., 4., 6.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 21

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

Lecturers: doc. RNDr. Renáta Fľaková, PhD., doc. RNDr. Dávid Krčmář, PhD., RNDr. Ivana Ondrejková, PhD., doc. RNDr. Renáta Adamcová, PhD., doc. RNDr. Martin Bednarik, PhD., RNDr. Tatiana Durmeková, PhD., doc. Mgr. Vladimír Greif, PhD., Mgr. Rudolf Tornyai, PhD.

Last change: 15.05.2021

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-110/15	Professional English 1

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

Number of credits: 2

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 62

A	B	C	D	E	FX
62,9	20,97	12,9	0,0	0,0	3,23

Lecturers: PhDr. Jarmila Cihová, PhD., RNDr. Tatiana Slováková, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-bXCJ-111/15	Professional English 2

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

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 48

A	B	C	D	E	FX
60,42	25,0	8,33	0,0	0,0	6,25

Lecturers: PhDr. Jarmila Cihová, PhD., Mgr. Barbara Kordíková, RNDr. Tatiana Slováková, PhD.

Last change: 08.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-bENS-034/15	Renewable Energy Sources

Educational activities:
Type of activities: lecture / seminar
Number of hours:
per week: 2 / 1 **per level/semester:** 28 / 14
Form of the course: on-site learning

Number of credits: 3

Recommended semester: 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 20

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

Lecturers: doc. RNDr. Marianna Molnárová, PhD., prof. Ing. Eva Chmielewská, CSc.

Last change: 30.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KDPP/N-bXDI-006/10	Rhetoric

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

Number of credits: 3

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

Educational level: I.

Prerequisites:

Course requirements:
participation, activity, eventually final essay
Scale of assessment (preliminary/final): Continuously 70% / during the examination period 30%

Learning outcomes:
The aim of the course is to teach students to adequately articulate their ideas, to express their attitudes and opinions, to use argumentation, think critically, to communicate adequately, and to listen or read with understanding.

Class syllabus:
Except the introductory lectures, the course is conceived as seminars with discussions on chosen topics.

Recommended literature:
Aristoteles: Rétorika. Bratislava: Thetis, 2009.
Recommended sources are given to each topic separately.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 1420

A	B	C	D	E	FX
50,14	36,83	10,42	1,48	0,56	0,56

Lecturers: Mgr. Štefan Zolcer, PhD.

Last change: 18.09.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KOrCh/N-bENS-012/15	Seminar on Organic Chemistry

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

Number of credits: 2

Recommended semester: 2.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 9

A	B	C	D	E	FX
66,67	0,0	22,22	0,0	11,11	0,0

Lecturers: Mgr. Andrea Martinická, PhD., RNDr. Pavol Tisovský, PhD.

Last change: 27.11.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KPl/N-bENS-013/15	**Course title:** Soil Biology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** 2 **per level/semester:** 28 **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 3.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content.C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: This course covers the background needed to understand complex linkages between soil organisms and soils. By the end of this course students should: • Understand importance of the soil as a natural environment of organisms, • understand the role of organisms in processes of soil organic matter transformations, • understand the influence of specific groups of organisms in soil formation process and soil structure formation, • understand participation of microorganisms in nutrient cycles in the soil environment, • understand advanced scientific methods used nowadays in soil research to characterize properties of the soil microbiocenosis.	
Class syllabus: This course will reveal importance of the soil environment for organisms which use the soil as a habitat. We will focus on solid, liquid and gas faze of the soils, enlighten effects of primary and secondary ecological factors on soil organisms. We will have a closer look at prokaryotes and eukaryotes species in soils (algae, cyanobacteria, fungi, bacteria and other soil micro, mezo and macro organisms) where we will emphasis species in European soil environments. We will discuss	

the role of primary producers, consumers and decomposers in formation of the soil organic matter and processes carried out by microorganisms taking part in nutrient cycles. We will also focus on actual research activities and methods dealing with soil species identification and quantitative and qualitative evaluation of microbiocenosis.

Recommended literature:

Institute for Environment and Sustainability JRC, 2010: European Atlas of Soil Biodiversity. Catalogue Number: LB-NA-24375-EN-C, ISBN: 978-92-79-15806-3, ISSN: 1018-5593.
Madigan, M.T., Martinko, J.M., Bender, K.S., Buckley, D.H., Stahl, D.A.,2010: Brock Biology of Microorganisms, 13/E. Cloth, p. 1152.

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 9

A	B	C	D	E	FX
77,78	22,22	0,0	0,0	0,0	0,0

Lecturers: Mgr. Peter Hanajík, PhD., prof. RNDr. Alexandra Šimonovičová, CSc.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KPl/N-bENS-019/15	**Course title:** Soil Science
Educational activities: **Type of activities:** practicals / lecture **Number of hours:** **per week:** 2 / 3 **per level/semester:** 28 / 42 **Form of the course:** on-site learning	
Number of credits: 6	
Recommended semester: 3.	
Educational level: I.	
Prerequisites:	
Course requirements: Grades will be based on the final exam discussion (contributing 100%). The course has a standardized grading system which is identified below: A (91 – 100%): Outstanding, excellent work (exceptional performance with strong evidence of original thinking and obvious capacity to analyze, synthesize and evaluate. B (81 – 90 %): Good, competent work; laudable performance with evidence of some original thinking, good problem-solving ability, exhibiting a serious, responsible engagement with the course content. C (73 – 80): Adequate, reasonably satisfactory work; fair performance but infrequent evidence of original thinking or the capacity to analyze, satisfies the minimum requirements of the course. D (66 – 72%): Less acceptable work; relatively weak performance with little evidence of original thinking or ability to analyze or synthesize course material. E (60 – 65%): Minimally acceptable work; very weak performance with little evidence of original thinking, showing inadequate grasp of some basic elements of the course. Fx (under 60%): Inadequate work; poor performance that indicates a lack of understanding or misunderstanding of essential subject matter.	
Learning outcomes: The course will introduce basic knowledge in soil chemical, physical and biological properties and processes. Students will learn soil profile features and characteristics, identification of soil horizons, soil profile description, World reference base for soil resources (WRB), and distribution of major soils. Participants will receive skill in understanding of soil processes and principles of soil classification.	
Class syllabus: Introduction to Soil Science. Basic features and characteristics of soils. Soil chemical properties and processes. Soil physical properties and processes. Soil biota and microbiological processes. Basic morphological features and properties. Soil horizons and soil profile descriptions. World reference base for soil resources (WRB). Soil and landscape relationships. Soil forming processes in the different world regions. Soils of temperate regions. Soils of steppe regions. Arctic soils. Soils in the Mediterranean region. Desert soils. Soils of humid and sub-humid tropics. Intrazonal and azonal soils. Anthropomorphic soils.	
Recommended literature:	

P.M. Huang, Y. Li, and M.E. Sumner (eds.), 2011: Handbook of Soil Sciences: Properties and Processes, 2nd ed. CRC Press, Boca Raton, FL, 1442 pp.
P.M. Huang, Y. Li, and M.E. Sumner (eds.), 2011: Handbook of Soil Sciences: Resource Management and Environmental Impacts, 2nd ed. CRC Press, Boca Raton, FL, 830 pp.
IUSS Working Group WRB. 2006: World reference base for soil resources 2006. World Soil Resources Reports No. 103. FAO, Rome, 128 pp.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 30

A	B	C	D	E	FX
60,0	16,67	10,0	6,67	6,67	0,0

Lecturers: RNDr. Juraj Balkovič, PhD., prof. RNDr. Pavel Dlapa, PhD.

Last change: 14.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJCh/N-bENS-052/18	Special Environmental Chemistry

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

Number of credits: 7

Recommended semester: 1.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers: RNDr. Dušan Galanda, PhD., RNDr. Jana Slimáková, PhD.

Last change: 19.12.2019

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bUXX-205/15	Summer physic-educational meeting 2

Educational activities:
Type of activities: other
Number of hours:
per week: **per level/semester:** 7d
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 2., 4.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 295

A	B	C	D	E	FX
99,32	0,0	0,0	0,0	0,0	0,68

Lecturers: Mgr. Kristína Vanýsková

Last change:

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KEM/N-mENS-024/19	Transdisciplinary Challenges in Landscape Ecology

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

Number of credits: 5

Recommended semester: 3.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 15

A	B	C	D	E	FX
40,0	33,33	6,67	13,33	0,0	6,67

Lecturers: RNDr. Martin Labuda, PhD., prof. RNDr. Oto Majzlan, PhD., RNDr. Božena Šerá, PhD.

Last change: 06.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KTV/N-bUXX-201/00	Winter physic-educational meeting

Educational activities:
Type of activities: other
Number of hours:
per week: **per level/semester:** 7d
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 1., 3., 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 469

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

Lecturers: Mgr. Martin Mokošák, PhD.

Last change: 02.06.2015

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KZ/N-bENS-006/15	Zoology

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 2 / 4 **per level/semester:** 28 / 56
Form of the course: on-site learning

Number of credits: 7

Recommended semester: 2.

Educational level: I.

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
58,33	16,67	25,0	0,0	0,0	0,0

Lecturers: doc. Mgr. Peter Vďačný, doc. RNDr. Ján Kodada, CSc.

Last change: 03.01.2020

Approved by:

COURSE DESCRIPTION

University: Comenius University in Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KPl/N-bEXX-115/19	Človek ako súčasť prírody

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

Number of credits: 3

Recommended semester: 1., 3., 5.

Educational level: I.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 242

A	B	C	D	E	FX
96,28	0,0	0,0	0,0	0,0	3,72

Lecturers: prof. RNDr. Pavel Dlapa, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Martina Zvaríková, PhD., RNDr. Ľubomír Jurkovič, PhD., Mgr. Tomáš Lánczos, PhD., prof. Ing. Eva Chmielewská, CSc.

Last change: 18.09.2019

Approved by: