Course descriptions

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COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-412/22	Abstract of a contribution from a domestic or an intenational conference (originally AFG, AFK, AFH, AFL)

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

Number of credits: 4

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1052

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-DIHG-006/22	**Course title:** Advanced Hydrogeochemistry
Educational activities: **Type of activities:** **Number of hours:** **per week: per level/semester:** **Form of the course:** on-site learning	
Type, volume, methods and workload of the student - additional information Study design: No specification with regard to the doctoral degree study (choice of methods – presence, distance, combined). Form of study: internal	
Number of credits: 5	
Recommended semester: 1., 2.., 3., 4..	
Educational level: III.	
Prerequisites:	
Course requirements: The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60%. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.	
Learning outcomes: By completing the course, the PhD student acquires advanced knowledge about the formation of chemical composition of precipitation, surface and groundwater, detailed information about the processes of water interaction with different types of rocks, hydrogeochemical processes, modeling of hydrogeochemical processes by speciation and inverse modeling, environmental isotopes, using the latest scientific knowledge also from a methodological point of view. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.	
Class syllabus: The course presents superstructure and advanced knowledge on the issue of formation of chemical composition of precipitation, surface and groundwater and on the evaluation of the quality of all types of natural waters. It is designed on the basis of the use of modern and classical methods for the evaluation of the processes of formation of the chemical composition of groundwater, the distribution of parameters of the chemical composition of groundwater according to individual hydrogeological units. The aim is to understand the relationships between the chemical composition of groundwater and other components of the natural environment. It provides an advanced	

overview of modern knowledge in the use of hydrogeochemical methods in hydrogeological and environmental practice, especially in the process of evaluating the qualitative properties of natural properties in relation to individual components of the environment. The study is based on modern methodological approaches (especially hydrogeochemical modeling and statistical methods). The content of the course also includes chapters on the assessment of the chemical status of groundwater bodies within the implementation of the Water Framework Directive in order to indicate the extent of their anthropogenic influence. The course is adapted to the specific needs of doctoral students.

Recommended literature:

Ženišová, Z., Fľaková, R., 2012: Textbooks on hydrogeochemistry, SAH Bratislava; Pitter, P, 2013: Hydrochemistry, VŠCHT Praha; Appelo, C.A.J., Postma, D., 2005: Geochemistry, groundwater and pollution, A.A. Balkema Publishers; Drever, J.I., 1997: The Geochemistry of Natural Waters, Prentice-Hall, Inc.; Fetter, C.W., 2001: Applied Hydrogeology, Pearson Education (US); Domenico, P.A., Schwartz, F.W., 1997: Physical and Chemical Hydrogeology. New York, John Wiley&sons, Inc. Other resources according to the specific needs of the solved dissertation works.

Languages necessary to complete the course:

English language

Notes:

Past grade distribution

Total number of evaluated students: 3

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Renáta Fľaková, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-505/22	Bachelor's thesis reviewer

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

Number of credits: 3

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 427

A	ABS	B	C	D	E	FX	NEABS
0,23	99,77	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-504/22	Bachelor's thesis supervisor

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

Number of credits: 8

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 133

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-414/22	Completing an long-term ERASMUS+ internship (minimum 60 days)

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 49

A	ABS	B	C	D	E	FX	NEABS
0,0	97,96	0,0	0,0	0,0	0,0	0,0	2,04

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-415/22	Completion of SAIA/NŠP internship program or other equivalent (minimum 30 days)

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 58

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-416/22	Completion of a short-term foreign internship (15-30 days, and related to the topic of the PhD thesis)

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

Number of credits: 7

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 109

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

STATE EXAM DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-DSSZ-303/22	**Course title:** Defence of dissertation thesis
Number of credits: 30	
Educational level: III.	
Course requirements: Conditions for passing the course: Course evaluation takes place as a part of the State examination in accordance to the Study regulations of the Faculty of Natural Sciences UK in Bratislava upon submission of the written part of the dissertation thesis (as final work). Assessment is standard and reflects the student's sufficient orientation in the issue. The conditions for successful course completion are in accordance with the Study Regulations of the Faculty of Natural Sciences UK.	
Learning outcomes: Educational outcomes: The aim of the course is to capitalise on theoretical, methodological and applied knowledge of doctoral studies in the elaboration and subsequent defence of the dissertation thesis, and thus the successful completion of doctoral studies.	
Class syllabus: Brief outline of the course: The student's dissertation thesis will demonstrate his/her ability and readiness for independent scientific and creative activities in the area of research or development or for independent theoretical and creative artistic creativity. It should be charactersied by a high degree of analysis and synthesis of knowledge, as well as a sufficient overview of existing literature. The work must be original and created by the author in compliance with the rules of working with information sources. The academic work must not appear to be plagiarised, nor infringe the copyrights of other authors. The author is required to thoroughly cite the information sources used, list the specific results of other authors or team of authors by citing the source, accurately describe the methods and working procedures of other authors or teams of authors, and document the laboratory results and field research of other authors or teams of authors. Style of citation is governed by the practice in the given scientific field, respecting the relevant norms and standards.	
State exam syllabus:	
Recommended literature: Recommended literature: No specifications regarding the character of a specific topic for the dissertation thesis. Recommended literature is included in the doctoral student's individual study plan.	
Languages necessary to complete the course: Required language for successful course completion: Slovak language in combination with English (study literature in English)	
Last change: 24.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/PriF-DSSZ-001/22	Dissertation 1

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

Number of credits: 5

Recommended semester: 1.

Educational level: III.

Prerequisites:

Course requirements:
Conditions for passing the course:
Course evalutation will be conducted individually based on the doctoral student‘s individual study plan, as well as on the basis of an agreement between the academic supervisor and doctoral student. Evaluation is standard and shall reflect a sufficient orientation of the student in the presented subject matter for successful course completion according to the Study Regulations of the Faculty of Natural Sciences UK.

Learning outcomes:
Educational outcomes: By passing this subject, the student will achieve sufficient orientation in the project issue of the dissertation thesis based on specific individual topics. This set task of knowledge is essential for a firmly established theoretical readiness of the course graduate in terms of his/her awareness, and equally supports his/her potential in a wide field of applied practice. Undoubtedly, the outcomes of his/her education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.

Class syllabus:
Brief outline of the course: The subject Dissertation Thesis is a compulsory part of the doctoral student’s study activities. The student requires a supremely individual character with regard to the specifics of the individual topics of the dissertation thesis. The basic syllabus should already be evident within the individual study plan of the doctoral student.
The subject is important especially in terms of understanding the basic theoretical and methodological aspects of the solution to the topic of the dissertation thesis with emphasis on self-study and consultation with the academic supervisor and a wide spectrum of consultants, who will take part in creating the professional potential of the doctoral student for the next (scientific) stage of his/her studies.

Recommended literature:
Recommended literature:
No specifications regarding the character of a specific topic for the dissertation thesis.
Recommended literature is included in the doctoral student’s individual study plan.

Languages necessary to complete the course:
Required language for successful course completion:
Slovak language in combination with English (study literature in English)

Notes:

Past grade distribution
Total number of evaluated students: 13

ABS	NEABS
92,31	7,69

Lecturers:

Last change: 18.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/PriF-DSSZ-002/22	Dissertation 2

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

Number of credits: 5

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:
Conditions for passing the course:
Course evalutation will be conducted individually based on the doctoral student‘s individual study plan, as well as on the basis of an agreement between the academic supervisor and doctoral student. Evaluation is standard and shall reflect a sufficient orientation of the student in the presented subject matter for successful course completion according to the Study Regulations of the Faculty of Natural Sciences UK.

Learning outcomes:
Educational outcomes: By passing this subject, the student will achieve sufficient orientation in the project issue of the dissertation thesis based on specific individual topics. This set task of knowledge is essential for a firmly established theoretical readiness of the course graduate in terms of his/her awareness, and equally supports his/her potential in a wide field of applied practice. Undoubtedly, the outcomes of his/her education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.

Class syllabus:
Brief outline of the course: The subject Dissertation Thesis is a compulsory part of the doctoral student’s study activities. The student requires a supremely individual character with regard to the specifics of the individual topics of the dissertation thesis. The basic syllabus should already be evident within the individual study plan of the doctoral student.
The subject is important especially in terms of understanding the basic theoretical and methodological aspects of the solution to the topic of the dissertation thesis with emphasis on self-study and consultation with the academic supervisor and a wide spectrum of consultants, who will take part in creating the professional potential of the doctoral student for the next (scientific) stage of his/her studies.

Recommended literature:
Recommended literature:
No specifications regarding the character of a specific topic for the dissertation thesis.
Recommended literature is included in the doctoral student’s individual study plan.

Languages necessary to complete the course:
Required language for successful course completion:
Slovak language in combination with English (study literature in English)

Notes:

Past grade distribution
Total number of evaluated students: 9

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 18.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/PriF-DSSZ-003/22	Dissertation 3

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

Number of credits: 5

Recommended semester: 3.

Educational level: III.

Prerequisites:

Course requirements:
Conditions for passing the course:
Course evalutation will be conducted individually based on the doctoral student‘s individual study plan, as well as on the basis of an agreement between the academic supervisor and doctoral student. Evaluation is standard and shall reflect a sufficient orientation of the student in the presented subject matter for successful course completion according to the Study Regulations of the Faculty of Natural Sciences UK.

Learning outcomes:
Educational outcomes: By passing this subject, the student will achieve sufficient orientation in the project issue of the dissertation thesis based on specific individual topics. This set task of knowledge is essential for a firmly established theoretical readiness of the course graduate in terms of his/her awareness, and equally supports his/her potential in a wide field of applied practice. Undoubtedly, the outcomes of his/her education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.

Class syllabus:
Brief outline of the course: The subject Dissertation Thesis is a compulsory part of the doctoral student’s study activities. The student requires a supremely individual character with regard to the specifics of the individual topics of the dissertation thesis. The basic syllabus should already be evident within the individual study plan of the doctoral student.
The subject is important especially in terms of understanding the basic theoretical and methodological aspects of the solution to the topic of the dissertation thesis with emphasis on self-study and consultation with the academic supervisor and a wide spectrum of consultants, who will take part in creating the professional potential of the doctoral student for the next (scientific) stage of his/her studies.

Recommended literature:
Recommended literature:
No specifications regarding the character of a specific topic for the dissertation thesis.
Recommended literature is included in the doctoral student’s individual study plan.

Languages necessary to complete the course:
Required language for successful course completion:
Slovak language in combination with English (study literature in English)

Notes:

Past grade distribution
Total number of evaluated students: 11

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 18.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/PriF-DSSZ-004/22	**Course title:** Dissertation 4
Educational activities: **Type of activities:** **Number of hours:** **per week: per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 4.	
Educational level: III.	
Prerequisites:	
Course requirements: Conditions for passing the course: Course evalutation will be conducted individually based on the doctoral student‘s individual study plan, as well as on the basis of an agreement between the academic supervisor and doctoral student. Evaluation is standard and shall reflect a sufficient orientation of the student in the presented subject matter for successful course completion according to the Study Regulations of the Faculty of Natural Sciences UK.	
Learning outcomes: Educational outcomes: By passing this subject, the student will achieve sufficient orientation in the project issue of the dissertation thesis based on specific individual topics. This set task of knowledge is essential for a firmly established theoretical readiness of the course graduate in terms of his/her awareness, and equally supports his/her potential in a wide field of applied practice. Undoubtedly, the outcomes of his/her education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.	
Class syllabus: Brief outline of the course: The subject Dissertation Thesis is a compulsory part of the doctoral student’s study activities. The student requires a supremely individual character with regard to the specifics of the individual topics of the dissertation thesis. The basic syllabus should already be evident within the individual study plan of the doctoral student. The subject is important especially in terms of understanding the basic theoretical and methodological aspects of the solution to the topic of the dissertation thesis with emphasis on self-study and consultation with the academic supervisor and a wide spectrum of consultants, who will take part in creating the professional potential of the doctoral student for the next (scientific) stage of his/her studies.	
Recommended literature: Recommended literature: No specifications regarding the character of a specific topic for the dissertation thesis. Recommended literature is included in the doctoral student’s individual study plan.	

Languages necessary to complete the course:
Required language for successful course completion:
Slovak language in combination with English (study literature in English)

Notes:

Past grade distribution
Total number of evaluated students: 7

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 10.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/PriF-DSSZ-005/22	**Course title:** Dissertation 5
Educational activities: **Type of activities:** **Number of hours:** **per week: per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 5.	
Educational level: III.	
Prerequisites:	
Course requirements: Conditions for passing the course: Course evalutation will be conducted individually based on the doctoral student‘s individual study plan, as well as on the basis of an agreement between the academic supervisor and doctoral student. Evaluation is standard and shall reflect a sufficient orientation of the student in the presented subject matter for successful course completion according to the Study Regulations of the Faculty of Natural Sciences UK.	
Learning outcomes: Educational outcomes: By passing this subject, the student will achieve sufficient orientation in the project issue of the dissertation thesis based on specific individual topics. This set task of knowledge is essential for a firmly established theoretical readiness of the course graduate in terms of his/her awareness, and equally supports his/her potential in a wide field of applied practice. Undoubtedly, the outcomes of his/her education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.	
Class syllabus: Brief outline of the course: The subject Dissertation Thesis is a compulsory part of the doctoral student’s study activities. The student requires a supremely individual character with regard to the specifics of the individual topics of the dissertation thesis. The basic syllabus should already be evident within the individual study plan of the doctoral student. The subject is important especially in terms of understanding the basic theoretical and methodological aspects of the solution to the topic of the dissertation thesis with emphasis on self-study and consultation with the academic supervisor and a wide spectrum of consultants, who will take part in creating the professional potential of the doctoral student for the next (scientific) stage of his/her studies.	
Recommended literature: Recommended literature: No specifications regarding the character of a specific topic for the dissertation thesis. Recommended literature is included in the doctoral student’s individual study plan.	

Languages necessary to complete the course:
Required language for successful course completion:
Slovak language in combination with English (study literature in English)

Notes:

Past grade distribution
Total number of evaluated students: 12

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 06.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/PriF-DSSZ-006/22	**Course title:** Dissertation 6
Educational activities: **Type of activities:** **Number of hours:** **per week:** **per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 6.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 8	

ABS	NEABS
100,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/PriF-DSSZ-007/22	Dissertation 7

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

Number of credits: 5

Recommended semester: 7.

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 11

ABS	NEABS
100,0	0,0

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/PriF-DSSZ-024/22	**Course title:** Dissertation 8
Educational activities: **Type of activities:** **Number of hours:** **per week:** **per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 8.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 4	

ABS	NEABS
100,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/PriF-DSSZ-025/22	**Course title:** Dissertation 9
Educational activities: **Type of activities:** **Number of hours:** **per week:** **per level/semester:** **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 9.	
Educational level: III.	
Prerequisites:	
Course requirements:	
Learning outcomes:	
Class syllabus:	
Recommended literature:	
Languages necessary to complete the course:	
Notes:	
Past grade distribution Total number of evaluated students: 3	

ABS	NEABS
100,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Martin Bednarik, PhD.

STATE EXAM DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KIHG/N-DGAG-400/22	**Course title:** Dissertation exam
Number of credits: 15	
Educational level: III.	

Course requirements:

Conditions for passing the course:

Course evaluation takes place as a part of the State examination in accordance to the Study regulations of the Faculty of Natural Sciences UK in Bratislava, as well as submission of the written part of the dissertation thesis within the set deadline. The subjects of the state examination include a discussion about the written work of the dissertation examination (prepared by the doctoral student), as well as other subjects of the oral examination (ad hoc) approved by the Dean. Assessment is standard and reflects the student's sufficient orientation in the issue. The conditions for successful course completion are in accordance with the Study Regulations of the Faculty of Natural Sciences UK.

Learning outcomes:

Educational outcomes: The objective of the course is to gain basic habits and cultural-ethical aspects of working with scientific literature, evaluation, and systemization of the studied knowledge. The doctoral student needs to successfully pass the dissertation examination according to the act on Universities and Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava.

Class syllabus:

Brief outline of the course:

Based on the description of the starting points, principles, and conclusions from the published results of the studied issues, the aim is to teach the doctoral student how to process critical research. A further objective is to understand the principles of scientific work and its legal, physical, and social attributes. The main output is the elaboration of the written work for the dissertation examination and its successful completion in accordance with the Study Regulations of the Faculty of Natural Sciences UK. The form and content of the work is regulated by article 34, paragraph 4 of the Study Regulations of the Faculty of Natural Sciences UK. The dissertation examination consists of a part consisting of a discussion of the written work for the dissertation examination, as wel as a part in which the doctoral student needs to demonstrate theoretical knowledge according to the focus of the dissertation topic. The composition of the Examination Committee, the determination of the Opponent (expert examiner) and the general course of the dissertation examination are governed by the current Study Regulations of the Faculty of Natural Sciences UK.

State exam syllabus:

Recommended literature:

Recommended literature: No specifications regarding the character of a specific topic for the dissertation thesis. Recommended literature is included in the doctoral student's individual study plan.

Languages necessary to complete the course:

Required language for successful course completion: Slovak language in combination with English (study literature in English)
Last change: 19.10.2022
Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-007/22	Doctoral Seminar in Engineering Geology and Hydrogeology 1

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

Recommended semester: 1.

Educational level: III.

Prerequisites:

Course requirements:
In the form of a presentation, the student summarizes the information obtained by a self-study of relevant literature and explains the objectives of his dissertation. The course will be classified as "graduated" if the doctoral student proves the fulfillment of obligations at the level of at least 60%. The conditions for a successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
Based on both the student´s presentation of the goals of the dissertation and the following discussion, the goals will be critically evaluated, as well as revised, if desirable.

Class syllabus:
During the semester regular consultations with the supervisor and a self-study prepare the student for the presentation of the goals of the dissertation. After the presentation, the individual goals, methodological procedures, their advantages and disadvantages and possible alternative procedures will be discussed. Possible technical risks will also be discussed and possible solutions proposed.

Recommended literature:
According to the specific needs of the solved dissertation topics.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 6

ABS	NEABS
83,33	16,67

Lecturers: prof. RNDr. Martin Bednarik, PhD.
Last change: 19.10.2022
Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-008/22	Doctoral Seminar in Engineering Geology and Hydrogeology 2

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:
The course is evaluated based on a presentation, where the student specifies the objectives of the dissertation in the context of his preliminary results. The course will be classified as “graduated” if the doctoral student proves the fulfillment of obligations at the level of at least 60%. The conditions for a successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
The specification of the objectives of the dissertation and the student´s presentation of preliminary results obtained in the first year of study are the outcomes of the seminar. The form of the seminar enables connection of the presentation with the subsequent discussion.

Class syllabus:
During the semester, through regular consultations with the supervisor, self-study and processing of the obtained data, student prepares the presentation specifying the objectives of the dissertation according to the preliminary results. After the presentation, the individual results, their interpretation and the proposed next steps will be discussed.

Recommended literature:
According to the specific needs of the solved dissertation topics.

Languages necessary to complete the course:
English

Notes:

Past grade distribution Total number of evaluated students: 6	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Martin Bednarik, PhD.	
Last change: 19.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-009/22	Doctoral Seminar in Engineering Geology and Hydrogeology 3

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

Recommended semester: 1., 3.

Educational level: III.

Prerequisites:

Course requirements:
The presentation of the theoretical part of the dissertation is evaluated, which has to be an overview of current scientific knowledge related to the scientific project of the doctoral student.The course will be classified as “graduated” if the doctoral student proves the fulfillment of obligations at the level of at least 60%. The conditions for a successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
A critical assessment of the objectives of the dissertation and the chosen methodological procedures in the form of student's presentation and subsequent discussion is the result of the seminar, which prepares the student for the Written Work for the Dissertation Examination and its defense.

Class syllabus:
Through regular consulting with the supervisor and a self-study during the semester, the student summarizes the theoretical foundations of his further work on the dissertation, as well as the current state of knowledge on the topic of the dissertation in the form of a presentation. After the student ´s speech, the presented conclusions will be discussed.

Recommended literature:
According to the specific needs of the solved dissertation topics.

Languages necessary to complete the course:
English

Notes:

Past grade distribution Total number of evaluated students: 5	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Martin Bednarik, PhD.	
Last change: 19.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-012/22	Engineering Geological Documents for Spatial Planning

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about the progress in the development of knowledge in the field of engineering geology. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of engineering geological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of engineering geological research and practice.

Class syllabus:
The course presents an advanced course to learn about the methodological aspects in the theoretical and practical level necessary to handle successfully the tasks that an engineering geologist must solve with cooperation with urban planning and construction engineering authorities. The course is especially focused on doctoral degree study an concentrates on selected methods of graphical presentation of different engineering geological documents necessary for rational and optimal urban use of the geological environment. The course is adapted to the specific needs of PhD students.

Recommended literature:
Ondrášik R., Vlčko, J., Fendeková, M. 2011: Geologické hazardy a ich prevencia, 286 s.
Gonzalez de Vallejo, L I; Ferrer, M (2011) Geological Engineering 1st edition, CRC Press.

Languages necessary to complete the course:

English language

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: doc. Mgr. Vladimír Greif, PhD.

Last change: 10.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-016/22	Engineering Geological Evaluation of Rock Properties

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 5

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified as “graduated” if the correct answers of the PhD student reach at least 60 %. The conditions for a successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the student acquires advanced and upgraded knowledge in the field of physical and mechanical properties of rocks with a focus on the topic of the dissertation at the level of the 3rd degree of university study. A special emphasis is put on modern methods of their determination. This knowledge is necessary for the theoretical preparedness of the PhD student in terms of his knowledge, but they also support the development of his potential in a wide range the of engineering geological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter.

Class syllabus:
Physical and mechanical properties of rocks (hard rocks, soft rocks and soils) at the advanced level of the 3rd degree of university study. Deformation properties of rocks in static and dynamic conditions. Thermophysical properties of rocks and the influence of thermal cyclic loading of rocks upon their deformation. Strength parameters of rocks, including shear parameters of discontinuities in rock masses. Hydromechanical properties of soils. Mechanics of unsaturated soils, suction. Fine-grained soils in pollution barriers and other environmental applications. Bentonites in technical barriers of deep geological repositories of radioactive waste. Soils as environment-friendly building material. The course syllabus is specifically adapted to the PhD student's dissertation topic.

Recommended literature:

Small J.C., 2016: Geomechanics in Soil, Rock, and Environmental Engineering. CRC Press: Boca Raton, USA, 541 p.
Bergaya F., Lagaly G. (Eds.), 2013: Handbook of Clay Science. 2nd ed. Elsevier Ltd.:Oxford, UK. Part A. Fundamentals, 874 p., Part B: Techniques and Applications, 813 p.
Schäfers A., Fahland S. (Eds.), 2014: Proceedings of the International Conference on the Performance of Engineered Barriers. BGR: Hannover, D,
Aranyossy J.F. (Ed.), 2007: Clays in Natural and Engineered Barriers for Radioactive Waste Confinement. Physics and Chemistry of the Earth, Parts A/B/C, Vol. 32, Issues 1–14, p. 1-966
Look B., 2014 : Handbook of Geotechnical Investigation and Design Tables. 2nd ed. CRC Press/ Balkema, Leiden, NL, 393 p.
Carslaw, H.S., Jaeger J.C., 1986: Conduction of Heat in Solids, Oxford University Press, New York, NY. Indraratna, B., Haque, A., 2000: Shear Behaviour of Rock Joints. Balkema Publishers, Rotterdam. Adamcová R., Frankovská J., Durmeková T., 2009: Engineering geological clay research for a radioactive waste repository in Slovakia. AGEOS, 1,2,23-32 Adamcová R., Kondrcová M., Ottner F. & Wriessnig K., 2020: Adobe material of the Temple of the Sun, Pachacamac, Peru: Engineering geological classification and sustainability assessment as a challenges. Acta Geologica Slovaca, 12, 2, 153–160. Adamcová R., Šuraba V., Krajňák A., Rosskopfová O., Galamboš, 2014: First shrinkage parameters of Slovak bentonites considered for engineered barriers in the deep geological repository of high-level radioactive waste and spent nuclear fuel. Journal of Radioanalytical and Nuclear Chemistry, 302,1,737-743 Literature related to the particular topics of the dissertation theses and to student´s needs.

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Renáta Adamcová, PhD.

Last change: 10.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-017/22	Engineering Geology Roles in Construction Industries

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

Type, volume, methods and workload of the student - additional information
Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 5

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about the progress in the development of knowledge in the field of engineering geology. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of engineering geological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of engineering geological research and practice.

Class syllabus:
The course presents an advanced course to learn about the methodological aspects in the theoretical and practical level necessary to handle successfully the tasks that an engineering geologist must solve when evaluating construction sites in complex engineering geological conditions, get acquainted with methods of prevention of the most important geohazards, with the methods of their monitoring, as well as with the methods of common construction procedures for the implementation of various types of constructions. The course is adapted to the specific needs of PhD students.

Recommended literature:
Malgot, J., Klepsatel, F., Trávníček, I. : Mechanika hornín a inžinierska geológia. Vyd. Alfa, Bratislava,1992 Záruba, Q., Mencl, V. : Inženýrská geologie. Academia, Praha, 1976
Gonzalez de Vallejo, L I; Ferrer, M (2011) Geological Engineering 1st edition, CRC Press, 678p

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers: doc. Mgr. Vladimír Greif, PhD.

Last change: 10.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-010/22	Geofactors of the Environment

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified as “graduated” if the correct answers of the PhD student reach at least 60 %. The conditions for a successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the subject, the student gains advanced and upgraded orientation in the topics an engineering geologist is dealing with in the field of geological hazards of the use of the geological environment. These are the geopotentials – available resources of energy and raw materials which the geological environment is offering, or suitable conditions of the geological environment for its use to a certain purpose, or the geobarriers complicating or eliminating the usage, with the emphasis on the geohazards, geological risk assessment and vulnerability. The student will be informed about theoretical and methodical essentials which are necessary for solving related tasks. This quantum of knowledge is substantial for a solidly established theoretical preparedness of the PhD student, as well as it supports the development of his potential in the broad area of the environmentally oriented engineering geology. Education results will also be reflected in the student's overview at the level of methodological approaches in the subject matter.

Class syllabus:
The study object is an advanced and upgraded course to learn methodical aspects, in both the theoretical and practical level, which are necessary to master the broad scale of interaction problems of the geological environment with the social sphere successfully, especially from the point of view of its use and the connected problems and limits. The use of the geological potentials to cover the needs of the society – evaluation of existing geopotentials (raw materials, areas extraordinarily suitable for certain activities and use), identification of new geopotentials or new ways of their use, research of the impact of their use and proposal of optimum approaches,

protection of the geological environment from any kind of pollution – prevention and remediation. Geobarriers, with focus on the geological hazard, risk and vulnerability. Prevention and mitigation of the impact of the geological hazard. Early-warning systems of landslides. Maps of susceptibility, hazard and risk for both the landuse planning and the civil engineering. The subject also includes selected methods of construction and graphical presentation of various types of engineering geological documents about the geological factors of the area, which are inevitable for a rational and optimum urban use of the geological environment. The course syllabus is specifically adapted to the PhD student's dissertation topic.

Recommended literature:

West T.R., Shakoor A., 2018: Geology Applied to Engineering. 2nd ed. Waveland Press, Inc.: Long Grove, USA, 576 p. Wainwright J., Mulligan M. (Eds.), 2013 Environmental Modelling. Finding Simplicity in Complexity. 2nd ed. Wiley-Blackwell: UK, 475 p. Artiola J.F., Pepper I.L., Bresseau M., 2004: Environmental Monitoring and Characterization. Elsevier Academic Press: London, UK, 410 p. Small J.C., 2016: Geomechanics in Soil, Rock, and Environmental Engineering. CRC Press: Boca Raton, USA, 541 p. SGEM, 2017: 17th Int. Multidisciplinary Scientific Geoconference. Science and Technologies in Geology, Exploration and Mining, Issue 12, Hydrogeology, Engineering Geology and Geotechnics. STEF92 Technology Ltd: Sofia, BL Kugler H., Ottner F., Froeschl H., Adamcova R., Schwaighofer B., 2002: Retention of inorganic pollutants in clayey base sealings of municipal landfills. Applied Clay Science, 21 (1-2), pp. 45-58. Adamcová R., Frankovská J., Durmeková T., 2009: Engineering geological clay research for a radioactive waste repository in Slovakia. AGEOS, 1,2,23-32 Literature related to the particular topics of the dissertation theses and to student´s needs.

Languages necessary to complete the course:

English language

Notes:

Past grade distribution

Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: doc. RNDr. Renáta Adamcová, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-400/22	Grant CU or Grant SAS or equivalent grant

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

Number of credits: 12

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 275

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-005/22	Groundwater Flow, Accumulation and Regime

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

Type, volume, methods and workload of the student - additional information
Study design: No specification with regard to the doctoral degree study (choice of methods presence, distance, combined).
Form of study: internal

Number of credits: 5

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about flow, accumulation of water in different types of the rock environment, and about factors and parameters of groundwater regime in all of quantitative attributes (water level, spring discharge, baseflow). This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.

Class syllabus:
The groundwater flow rules in different rock types. Influence of rock complexes on type and velocity changes. Accumulation ability of the rock environment on dependence of permeability type, degree of disruption, structure and stratigraphy. Groundwater regime factors focused on global climatic factors, regional geologic specifics and hydraulic parameters of the aquifers. Anthropogenic influences on groundwater flow and regime. Compensatory ability of aquifer by overexploiting of groundwater sources.

Recommended literature:

Domenico, P.A., Schwarz, F.W., 1998: Physical and Chemical Hydrogeology. 2nd Edition. John Wiley&Sons, Inc. New York; Zheng, C., Wang, P.P., 1999:0 MT3DMS: A modular three-dimensional multispecies transport model for simulation of advection, dispersion, and chemical reactions of contaminants in ground-water systems; documentation and user's guide," Contract Report SERDP-99-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 3

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Dávid Krčmář, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-015/22	Groundwater Pollution and Protection

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

Type, volume, methods and workload of the student - additional information
No specification with regard to the doctoral degree study (choice of methods – presence, distance, combined).
Form of study: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60%. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about in the field of pollution research and groundwater protection. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.

Class syllabus:
The study subject is advanced course on the topic of groundwater protection. It offers a comprehensive view of pollutants in water, their transport, behavior in the environment and the possibility of their removal. The course, specially designed for doctoral studies, focuses on selected topics of contamination hydrogeology, as well as on a comprehensive solution to groundwater protection problems. In this sense, it focuses on modern methods of identification of pollutants in water, principles and methods of pollution survey. The doctoral student will gain advanced knowledge about various types of contamination, especially contamination with metals, organic substances, contamination in low-permeability environments, contamination from landfills, mining waste and agriculture. The study emphasizes the processes involved in the transport of pollution in groundwater and methods of modeling these processes. The subject is an extension to the study of

groundwater protection, it presents the basic principles of modern remediation methods, as well as methods of natural and regulated attenuation of organic substances. The course is adapted to the specific needs of doctoral students.

Recommended literature:
Appelo, C.A.J., Postma, D., 2005: Geochemistry, groundwater and pollution, A.A. Balkema Publishers; Fetter, C.W., 2001: Applied Hydrogeology, Pearson Education (US); Domenico, P.A., Schwartz, F.W., 1997: Physical and Chemical Hydrogeology. New York, John Wiley&sons, Inc. Šráček O., Datel J., Mls J., 2002: Kontaminační hydrogeologie, Nakladatelství Karolinum. Freeze R.A., Cherry J.A., 1979: Groundwater. New Jersey, Prentice-Hall, Inc. Other resources according to the specific needs of the solved dissertation works.

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 3

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Renáta Fľaková, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-013/22	Hydrogeological Particularities of Rock Complexes in Slovakia

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

Type, volume, methods and workload of the student - additional information
No specification with regard to the doctoral degree study (choice of methods – presence, distance, combined).
Form of study: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about the hydrogeological specificity of the Slovak rock complexes. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.

Class syllabus:
Influence of the rock complexes on distribution, flow and discharge of groundwater on the Earth surface. Groundwater chemical compound forming in the different types of the rock complexes. Synthesis of the rock complexes qualitative parameters and their influence on movement of groundwater. General rock complexes characteristic from groundwater amount point of view and usage capabilities for any kinds of usage.

Recommended literature:
Brassington, R., 2007: Field hydrogeology, John Wiley and Sons Ltd; Jetel, J., 1985: Methods of regional evaluation of hydraulic properties of rocks, Metod. Příruč. Ústř. Úst. Geol. 1. Praha; Edition of explanations for hydrogeological maps of Slovakia, Štátny geologický ústav Dionýza

Štúra, Bratislava, 1987–2013. Other resources according to the specific needs of the solved dissertation works.

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 3

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Dávid Krčmář, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-413/22	Intellectual Property Rights Document (originally AGJ)

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

Number of credits: 10

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-001/22	Methods of Engineering Geological Research

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

Type, volume, methods and workload of the student - additional information
Not specified, regarding the 3rd degree of study; combined method.

Number of credits: 5

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfilment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about the progress in the development of knowledge in the field of engineering geology. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of engineering geological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of engineering geological research and practice.

Class syllabus:
The course presents an advanced course to learn about the methodological aspects in the theoretical and practical level necessary to handle successfully the tasks that an engineering geologist must solve when evaluating construction sites in complex engineering geological conditions, get acquainted with methods of prevention of the most important geohazards, with the methods of their monitoring, as well as with the methods of common construction procedures for the realization of various types of constructions. The course is adapted to the specific needs of PhD students.

Recommended literature:
According to the specific needs of the solved dissertation works.

Languages necessary to complete the course:
Slovak in combination with English (literature is in English).

Notes:	
Past grade distribution Total number of evaluated students: 3	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Martin Bednarik, PhD.	
Last change: 19.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-002/22	Methods of Hydrogeological Research

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

Type, volume, methods and workload of the student - additional information
Without specification with regard to the doctoral degree, on-site/on-line/combined learning.

Number of credits: 5

Recommended semester: 3.

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfilment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about the progress in the development of knowledge in the field of hydrogeology. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.

Class syllabus:
Rules of the groundwater creation, flow and circulation in the aquifer. Types of hydrogeological structures. Follow-up knowledge about the creation of physical and chemical composition of groundwater during its movement in transit-accumulation area of hydrogeological structure. Modern methods of hydrogeological investigation and research – intersection of knowledge of various geological disciplines by evaluation of conditions of development and accumulation of water in rock environment. Knowledge and forecasting modeling tools of groundwater natural amounts changes.

Recommended literature:
According to the specific needs of the solved dissertation works.

Languages necessary to complete the course:
Slovak in combination with English (literature is in English).

Notes:	
Past grade distribution Total number of evaluated students: 4	
ABS	NEABS
100,0	0,0
Lecturers: doc. RNDr. Dávid Krčmář, PhD.	
Last change: 19.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-014/22	Mineral and Geothermal Waters

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

Type, volume, methods and workload of the student - additional information
No specification with regard to the doctoral degree study (choice of methods – presence, distance, combined).
Form of study: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60%. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge about in the field of genesis, spatial distribution and methods of evaluating the amount of mineral and geothermal waters at the local and regional level. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of hydrogeological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter. The course is clearly designed in accordance with other courses, with the aim of training the student to solve specific problems of hydrogeological research and practice.

Class syllabus:
The study subject is and advanced course on the topic of mineral and geothermal waters. It offers a comprehensive view of the evaluation of the processes of chemical composition formation and the occurrence of mineral and geothermal waters in relation to different types of geological environment. The course specially designed for doctoral studies focuses on selected topics for evaluating the specificity of mineral and geothermal waters in terms of their quality, quantity, use and protection. In this sense, it focuses on modern methods of identifying the origin of these waters, principles and methods of their search and capture for various uses. Teaching is adjusted based on the specific needs of doctoral students.

Recommended literature:
Balderer, W, Porowski, A., Idris, H., LaMoreaux, J.W. (Eds.), 2014: Thermal and Mineral Waters, Springer-Verlag Berlin; Brassington R., 2007: Field hydrogeolgy. John Wiley and Sons Ltd.; Hurter, S. et al., 2002: Atlas of Geothermal Resources in Europe, Office for Official Publications of the European Communities; Franko, O., Gazda, S., Michalíček, M., 1975: Tvorba a klasifikácia minerálnych vôd Západných Karpát, GÚDŠ Bratislava. Other resources according to the specific needs of the solved dissertation works.

Languages necessary to complete the course:
English language

Notes:

Past grade distribution
Total number of evaluated students: 2

ABS	NEABS
100,0	0,0

Lecturers: doc. RNDr. Renáta Fľaková, PhD.

Last change: 19.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-508/22	Other activities

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:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 763

A	ABS	B	C	D	E	FX	NEABS
0,13	99,87	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-501/22	P1 Pedagogical output as a whole (originally ACA, ACB, BCI, BCB)

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 11

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-503/22	P2 Pedagogical output as a part (originally BCK)

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

Number of credits: 10

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-502/22	P2 Pedagogical output as part (originally ACC, ACD)

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

Number of credits: 15

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-507/22	Pedagogical activity (4 hours/WS and 4 hours/SS) or alternative pedagogical work

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

Number of credits: 2

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 860

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KIHG/N-DIHG-011/22	Quantitative Modeling in Engineering Geology

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

Type, volume, methods and workload of the student - additional information
Study design: Not specified, regarding the 3rd degree of study; combined method
Education form: internal

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the course takes place in the form of an oral exam, the successful completion of which reflects the sufficient orientation of the student in the issue. The course will be classified provided that the PhD student proves the fulfillment of obligations at the level of at least 60 %. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences.

Learning outcomes:
By completing the course, the PhD student acquires advanced knowledge in the field of quantitative modeling of geodynamic phenomena with a focus on the topic of the dissertation work in the scope of the 3rd degree of university study. This knowledge is necessary for the theoretical equipment of the PhD student in terms of his knowledge, but also supports the development of his potential in a wide area of engineering geological practice. The results of education will also be reflected in the student's overview at the level of methodological approaches in the subject matter.

Class syllabus:
Statistical analyzes - bivariate and multivariate analysis. Geotechnical-engineering approaches - deterministic analysis, probabilistic approach. Analyzes using neural networks. Discontinuous modeling methods in rocks - DDA, DEM and others.

Recommended literature:
Bednarik M., Yilmaz I., Marschalko M., 2012: Landslide hazard and risk assessment: a case study from the Hlohovec - Sered' landslide area in south-west Slovakia. Natural Hazards, 64(1)
Warner R.M., 2012: Applied Statistics: From bivariate through Multivariate Techniques. SAGE Publications. Jing L., Stephansson O., 2007: Fundamentals of discrete element methods for rock engineering:Theory and applications. Elsevier

Languages necessary to complete the course:
English language

Notes:	
Past grade distribution Total number of evaluated students: 1	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Martin Bednarik, PhD., doc. Mgr. Vladimír Greif, PhD.	
Last change: 10.10.2022	
Approved by: prof. RNDr. Martin Bednarik, PhD.	

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KDPP/N-DSSZ-500/22	Selected topics from university pedagogy for non-teachers

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

Number of credits: 3

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 40

A	ABS	B	C	D	E	FX	NEABS
0,0	95,0	0,0	0,0	0,0	0,0	0,0	5,0

Lecturers: RNDr. Jana Ciceková, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., PhDr. ThLic. Peter Ikhardt, PhD.

Last change: 30.09.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-DSSZ-022/22	Slovak for Foreign Doctoral Students 1

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

Number of credits: 3

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:
The objective of the course is to acquire the basics of Slovak in a communicative way, to develop individual language skills (listening, reading, writing and speaking) based on the Common European Framework of Reference for Languages (CEFR) for the level A1, from a complete beginner level.
Based on the completion of the course, the participants are able to understand and react to common situations. They are able to speak about themselves, ask for more information
they need to know.
Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination.

Learning outcomes:
The objective of the course is to acquire the basics of Slovak in a communicative way, to develop individual language skills (listening, reading, writing and speaking) based on the Common European Framework of Reference for Languages (CEFR) for the level A1, from a complete beginner level.
Based on the completion of the course, the participants are able to understand and react to common situations. They are able to speak about themselves, ask for more information
they need to know.

Class syllabus:
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1 (Lekcia: 1-5). UK v Bratislave, 2012.
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica
Audio program: https://uniba.sk/krizom-krazom
Worksheets, website: https://slovake.eu/sk

Recommended literature:
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1 (Lekcia: 1-5). UK v Bratislave, 2012.
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica
Audio program: https://uniba.sk/krizom-krazom
Worksheets, website: https://slovake.eu/sk

Languages necessary to complete the course:
Slovak in combination with English (the study literature is in both Slovak and English)

Notes:
It is possible to register for the course just once. Students may begin in either the Summer or Winter semester.

Past grade distribution
Total number of evaluated students: 93

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

Lecturers: Mgr. Karin Rózsová Wolfová

Last change: 28.09.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-DSSZ-023/22	Slovak for Foreign Doctoral Students 2

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

Number of credits: 2

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:
Type, extent and method of academic activities: 2 hours (at 60 min. per hour) of weekly lessons in the form of seminars. All academic activities will take place during the lessons.
Number of credits: 3 credits
Recommended semester/trimester of study: from 1st to 8th semester
Level of study: third
Subject conditions: Slovak for Foreign Doctoral Students 1
Requirements for course completion: active participation during lessons, ongoing work on the assignments. There will be a final examination at the end of the semester.
Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination.

Learning outcomes:
Course Objectives: The objective of the course is to acquire the basics of Slovak in a communicative way, to develop individual language skills (listening, reading, writing and speaking) based on the Common European Framework of Reference for Languages (CEFR) for the level A1 - intended for beginner or pre-intermediate.

Class syllabus:
The lessons contain the basics of Slovak grammar which are relevant to the specifics of Slovak as a foreign language. Selected grammatical phenomena, conjugation and declination are practised. Vocabulary is focused on real-life communication needs.

Recommended literature:
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, workbook
Audio program: https://uniba.sk/krizom-krazom
Worksheets are prepared by the course instructor.
Portal: https://slovake.eu/sk

Languages necessary to complete the course:
Slovak in combination with English (the study literature is in both Slovak and English)

Notes:
It is possible to register for the course just once. Students may begin in either the Summer or Winter semester.

Past grade distribution
Total number of evaluated students: 64

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

Lecturers: Mgr. Karin Rózsová Wolfová

Last change: 18.07.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KJ/N-DSSZ-024/22	**Course title:** Slovak for Foreign Doctoral Students 3
Educational activities: **Type of activities:** **Number of hours:** **per week: per level/semester:** **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Course requirements: Type, extent and method of academic activities: 2 hours (at 60 min. per hour) of weekly lessons in the form of seminars. All academic activities will take place during the lessons. Number of credits: 3 credits Recommended semester/trimester of study: from 1st to 8th semester Level of study: third Subject conditions: Slovak for Foreign Doctoral Students 2 Requirements for course completion: active participation during lessons, ongoing work on the assignments. There will be a final examination at the end of the semester. Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination.	
Learning outcomes: The objective of the course is to acquire the basics of Slovak in a communicative way, to develop individual language skills (listening, reading, writing and speaking) based on the Common European Framework of Reference for Languages (CEFR) for the levels A1 – A2. Intended for levels A1-A2, beginner to pre-intermediate	
Class syllabus: The lessons contain the basics of Slovak grammar which are relevant to the specifics of Slovak as a foreign language. Selected grammatical phenomena, conjugation and declination are practised. Vocabulary is focused on real-life communication needs.	
Recommended literature: Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1, A2 Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, workbook Audio program: https://uniba.sk/krizom-krazom Worksheets are prepared by the course instructor. Portal: https://slovake.eu/sk	
Languages necessary to complete the course: Slovak in combination with English (the study literature is in both Slovak and English)	

Notes:
It is possible to register for the course just once. Students may begin in either the Summer or Winter semester.

Past grade distribution
Total number of evaluated students: 59

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

Lecturers: Mgr. Karin Rózsová Wolfová

Last change: 18.07.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-DSSZ-028/22	Slovak for Foreign Doctoral Students 4

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

Number of credits: 2

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:
Grading (Assessment/Evaluation):
Active participation during lessons, ongoing work on the assignments. There will be a final examination at the end of the semester. Credits will be awarded to students who receive more than 60% on the final examination. The course participants will be awarded a pass or a fail upon course completion.

Learning outcomes:
Objectives and outcomes:
The objective of the course is to acquire the basics of Slovak in a communicative way, to develop individual language skills (listening, reading, writing and speaking) based on the Common European Framework of Reference for Languages (CEFR) for the levels A1 – A2, pre-intermediate level.
Based on the completion of the course, the participants are able to understand the common situations and they are able to have a discussion and comment basic daily scenarios.

Class syllabus:
Brief outline of the course:
The lessons contain the basics of Slovak grammar which are relevant to the specifics of Slovak as a foreign language. Selected grammatical aspects (verb - conjugation/next conjugation classes, possessive pronouns, I like/enjoy doing something, I like something, comparison of adjectives and adverbs, conditional) are practised. Vocabulary is focused on real-life communication needs.

Recommended literature:
Recommended literature:
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1. UK v Bratislave, 2012.
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A2. (Lekcia 1-4). UK v Bratislave, 2012.
Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica
Audio program: https://uniba.sk/krizom-krazom
Worksheets, website: https://slovake.eu/sk

Languages necessary to complete the course:

Language of instruction:
Slovak in combination with English (the study literature is in Slovak).

Notes:

Past grade distribution
Total number of evaluated students: 19

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

Lecturers: Mgr. Karin Rózsová Wolfová

Last change: 18.10.2022

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-506/22	Supervisor of the SSC contribution

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

Number of credits: 4

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 12

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-404/22	V1 Scientific output as a whole - ESB monograph (originally AAA, ABA), individual authorship less than 3 AH

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-401/22	V1 Scientific output as a whole – ESB monograph (originally AAA, ABA), individual authorship share ≥ 3 AH

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

Number of credits: 30

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-405/22	V2 Scientific output as part - study in ESB or collection (originally AAB, ABA, ABB), individual authorship less than 3 AH

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 8

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-402/22	V2 Scientific output as part - study in ESB or collection (originally AAB, ABA, ABB), individual authorship share ≥ 3 AH

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

Number of credits: 30

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-411/22	V2 Scientific output as part of ESB, collection - contribution in peer reviewed scientific collection, monograph (originally AEC, AFA, AFC, AED)

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

Number of credits: 6

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 529

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-406/22	V3 Scientific output as a part - study in a journal (originally AAB, ABA, ABB), individual authorship less than 3 AH

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 4

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-403/22	V3 Scientific output as a part - study in a journal (originally AAB, ABA, ABB), individual authorship ≥ 3 AH

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

Number of credits: 30

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-410/22	V3 Scientific output in a journal outside the index databases (originally ADE, ADF)

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

Number of credits: 12

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 82

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-407/22	V3 Scientific output in a journal registered by CCC, WOS, SCOPUS - JCR/Q1 – Q2 (originally ADC, ADD, ADM, ADN), first or corresponding author

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

Number of credits: 50

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 234

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-408/22	V3 Scientific output in a journal registered by CCC, WOS, SCOPUS - JCR/Q3- Q4 (originally ADC, ADD, ADM, ADN), first or corresponding author

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

Number of credits: 40

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 113

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF/N-DSSZ-409/22	V3 Scientific output in the journal registered by CCC, WOS, SCOPUS - JCR/Q1 – Q2 – Q3 - Q4 (originally ADC, ADD, ADM, ADN), co-author

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

Number of credits: 20

Recommended semester:

Educational level: III.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 391

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

Lecturers:

Last change:

Approved by: prof. RNDr. Martin Bednarik, PhD.