Course descriptions

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COURSE DESCRIPTION

Academic year: 2025/2026

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: 1028

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-001/22	Advanced Physical Chemistry 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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 2

Number of credits: 5

Recommended semester: 1., 2..

Educational level: III.

Prerequisites:

Course requirements:
Compulsory elective course completed by an examination in selected chapters of basic Physical Chemistry.

Learning outcomes:
Acquisition of the latest theoretical knowledge in selected chapters of the subject of physical chemistry based on the current state of scientific knowledge, which are a prerequisite for the elaboration of a written work, successful completion of the dissertation exam and the objectives of the dissertation project.

Class syllabus:
The course is focused on selected topics of basic physical chemistry related to the focus of the dissertation. The exact syllabus and choice of topics should be determined in consultation with the instructor and examiner in the following topics and areas: Chemical thermodynamics, chemical systems and equilibrium, electrochemistry, reaction kinetics, chemical reactions and phase transformations, theoretical chemistry, statistical thermodynamics, chemical bonding theory and colloid chemistry. Teaching takes place individually with consultations with experts in the field using the available professional literature.

Recommended literature:
Determined individually on the basis of student's study plan

Languages necessary to complete the course:
The course is in English.

Notes:

Past grade distribution Total number of evaluated students: 13	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Juraj Bujdák, DrSc.	
Last change: 18.09.2022	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-002/22	Advanced Physical Chemistry 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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26

Number of credits: 5

Recommended semester: 1., 2..

Educational level: III.

Prerequisites:

Course requirements:
Compulsory elective course completed by an examination in selected chapters of applied Physical Chemistry.

Learning outcomes:
Gaining the latest knowledge in selected areas and topics of applied physical chemistry and related disciplines, especially in the field of methods for characterizing the chemical structure, especially spectral methods. Acquisition of knowledge on the current state of scientific knowledge, which are a prerequisite for the elaboration of a written work, successful completion of the dissertation exam and the goals of the dissertation project.

Class syllabus:
The course is focused on selected topics of applied physical chemistry related to the focus of the dissertation. The syllabus should be determined after consultation with the supervisor and examiner on the following topics and areas: Chemical structure, physical chemistry, theoretical principles and application of methods used in chemical research, determination of chemical structure, basics and application of spectral methods, advanced and specialized topics of physical chemistry - chemistry of surfaces, materials, macromolecular and biophysical chemistry. Teaching takes place individually with consultations with experts in the field using professionally available literature.

Recommended literature:
Determined individually on the basis of student's study plan.

Languages necessary to complete the course:
The course is in English.

Notes:	
Past grade distribution Total number of evaluated students: 8	
ABS	NEABS
100,0	0,0
Lecturers: doc. RNDr. Monika Jerigová, PhD.	
Last change: 18.09.2022	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

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: 414

A	ABS	B	C	D	E	FX	NEABS
0,24	99,76	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers:

Last change:

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 131

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-011/22	Chemical Reactivity

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
Form of Study: lecture, seminar, individual
Number of contact hours: per week: per level/semester: 30 hrs in the 1st. year, winter smester
Method: Total number of contact hours per semester is 30, including lectures and seminars. In critical situation the teaching might be performed online too.

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
Oral examination. Passed/Failed

Learning outcomes:
The aim of the course is to improve knowledge on current methods in chemical reactivity. Particular choice of the methods is determined by the thesis topic. Students will apply achieved skills for solving specific tasks in the frame of his/her dissertation.

Class syllabus:
· Potential energy (hyper)suface, stationary points, reaction profile
· Ab initio calculations of typical reaction mechanizms
· Frontier molecular orbitals (HOMO/LUMO interactions), reactivity indices
· Tracing the reaction koordinte – IRC method
· Effect of dynamic and non-dynamic correlation in chemical reactions
· Relativistic effects in chemical reactions
· Claculations of equilibrium and rate constants in the gas phase
· Non-adiabatic effect in reactivity
· Methods for non-covalent systems with increasing complexity

Recommended literature:
· J. Keeler a P. Wothers: Chemical structure and reactivity, Oxford 2014
· Z. Havlas a R. Zahradník, Řešené úlohy z chemické reaktivity, Academia, 1987.
· P. Atkins, J. De Paula, Elements of physical chemistry, Oxford 1994.
· I. Fleming, Hraniční orbitály a reakce v organické chemii, SNTL 1983
· K. Fukui, The role of frontier orbitals in chemical reactions, Nobel lecture, 8 December, 1981.

Languages necessary to complete the course:

English or Slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: prof. RNDr. Ivan Černušák, DrSc., RNDr. Lukáš Félix Pašteka, PhD., doc. Mgr. Michal Pitoňák, PhD., Mgr. Michal Repiský, PhD.

Last change: 18.09.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 44

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

Lecturers:

Last change:

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 57

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 106

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. Juraj Bujdák, DrSc.

STATE EXAM DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/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: 22

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 12.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/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: 15

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 18.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/PriF-DSSZ-003/22	**Course title:** 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: 15

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 18.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/PriF-DSSZ-004/22	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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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	
Type, volume, methods and workload of the student - additional information Type, scope and methods of instruction: No specifications concerning the degree of study (choice of methods – in class, distant learning, or a combination of both)	
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: 10

ABS	NEABS
100,0	0,0

Lecturers:

Last change: 06.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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: 9

ABS	NEABS
100,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/PriF-DSSZ-007/22	**Course title:** 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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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: 0

ABS	NEABS
0,0	0,0

Lecturers:
Last change:
Approved by: prof. RNDr. Juraj Bujdák, DrSc.

STATE EXAM DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 262

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCTP-009/22	Group Theory in Chemistry

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: 1., 3.

Educational level: III.

Prerequisites:

Course requirements:
Oral exam.

Learning outcomes:
The aim of the course is to improve knowledge about symmetry of molecules and its link to matrix elements and eigen functions of Hamiltonian. Student will exploit group theory for system classification of states and properties of molecules and will apply achieved skills for solving specific tasks in the frame of his/her dissertation.

Class syllabus:
· Concept of symmetry in chemistry, definition of mathematical group, general examples of groups, point groups.
· Matrix representation of groups, symmetry operations and elements, character tables.
· Reducible and irreducible representations, direct product of representations.
· Applications: symmetry adapted orbitals, symmetry of electronic states, symmetry of molecular vibration modes, symmetry in crystals, vanishing integrals.
· Relativistic quantum chemistry and double groups (symmetry of spatial and spin coordinates).

Recommended literature:
· P.W. Atkins, Fyzikálna chémia 6.vyd., STU Bratislava 1999.
· J. Fišer, Symetrie v kvantové chemii,SNTL, Praha 1980.
· F. A. Cotton, Chemical applications of group theory, 3rd ed., Wiley, New York, 1990.
· D.M. Bishop, Group Theory and Chemistry, Dover Books, 1993.
· M. Tinkham, Group theory and quantum mechanics, McGraw-Hill, New York, 1964.

Languages necessary to complete the course:
English or Slovak

Notes:

Past grade distribution Total number of evaluated students: 5	
ABS	NEABS
100,0	0,0
Lecturers: prof. RNDr. Vladimír Kellö, DrSc., doc. Mgr. Pavel Neogrády, DrSc.	
Last change: 03.02.2025	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-008/22	Modeling of Biosystems

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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
The evaluation of the subject takes place within the state examination in accordance with the Study Regulations of Comenius University in Bratislava, after the submission of the prepared work for the dissertation examination. The examination includes a discussion of a written seminar work based on solutions of selected model problems. Assessment is standard and reflects the student's sufficient orientation in the given issue at the level of excellent with excellent study results (A), very good with still above-average results (B), good with an average overview in the subject area (C), satisfactory with acceptable results (D) or sufficient with a minimum of acceptable learning outcomes (E). The conditions for successful completion of the course are also regulated by the Study Regulations of Comenius University.

Learning outcomes:
The graduate will get acquainted with the methods of applying physico-chemical principles for the development of simulation models of biological systems. He will gain knowledge about the relationships between the basic laws of physics and chemistry and their consequences and manifestations in complex systems simulating physiological functions. The graduate will gain knowledge and skills in the use of basic computational methods and numerical tools for modeling the spatio-temporal dynamics of living systems.

Class syllabus:
• Definition of systems biology, subject of its interest and methods in research of complex systems.
• Approaches and strategies in the development of integrated system models.
• Chemical kinetics and metabolic models. Systems of ordinary differential equations and methods of their solution.
• Transport processes and compartmental models. Construction of time-space models. Systems of partial differential equations and methods of their solution.

• Modeling of stochastic processes in biological systems.
• Optimization of model parameters, sensitivity analysis, stability of nonlinear models.

Recommended literature:
· C. P. Fall et al.: Computational Cell Biology, Springer, New York, 2002.
· J. Keener, J. Sneyd: Mathematical Physiology: I. Cellular Physiology, 2nd Edition, Springer, 2009.
· J. Keener, J. Sneyd: Mathematical Physiology: II. Systems Physiology, 2nd Edition, Springer, 2009.
· L. Alberghina, H. Westerhoff: Systems biology: Definitions and perspectives, Springer, 200

Languages necessary to complete the course:
The course is in English.

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: doc. RNDr. Ivan Valent, CSc.

Last change: 18.09.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-010/22	Nano- and Femto-chemistry

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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26
Study method: presence

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
Conditions for passing the course: Evaluation is based on an oral examination (25%) and a written test along with problem solving (75%). Final evaluation and classification are binary – pass or not pass.

Learning outcomes:
A subject provides advanced knowledge in an overlap of two fields – nanotechnology, as an expansion of surface chemistry, and femtochemistry, as an expansion of photochemistry, dealing with nanometer structures and femtosecond dynamics. Nanotechnology provides details of examples from quantum semiconductor structures on atomic level. Femtochemistry provides details of examples from utilization of ultrafast laser spectroscopy, as progressive spectral method, with focus on coherent control of chemical reactions. Example is a photocatalysis on TiO2 nanoparticles.

Class syllabus:
Nanotechnology. Lennard-Jones potential and cohesive energies. Energy bands and gaps – insulator, conductor, and semiconductor. Real and reciprocal space, wave vector. Physisorption and chemisorption, molecular and dissociative adsorption. Chemical surface reaction, Langmuir-Hinshelwood and Eley-Rideal models. Langmuir model and BET isotherm. Phonon, plasmon, exciton, and polaron. Fermi level, vacuum level, and work function. Scanning tunnelling microscopy and low energy electron diffraction. Surface heterostructures and semiconductor components, example of laser diode and quantum confined structures – quantum film, wire, and dot. Femtochemistry. Principle of LASER and spontaneous/stimulated emission. Femtosecond laser and Ti-sapphire oscillator. Nonlinear optics. Polarization. Kerr lens, mode-locking, and self-phase modulation. Heissenberg principle and compensation of group velocity dispersion. Time resolved laser spectroscopy, motion on potential energy surface, and dynamics of electron

excitation/relaxation. Intra-molecular vibration redistribution. Shaping of laser pulse: intensity, phase, and polarization. Interference, coherent control, adaptive control, and learning genetic/ evolution algorithm. Photochemistry of solid surfaces. TiO2 photocatalysis. Radical OH. Electron stimulated desorption from solid surface and Menzel-Gomer-Redhead model. Vibration induced desorption from surface and isotope effect. UV monophoton and IR multiphoton excitation. Effect of UV light, hydration and dimerization of nitrogen bases, and vitamin D generation. Green photosynthesis and chlorophyl. Environmental radical photodegradation. Photodynamic therapy. Photography black-and-white, colored, digital, and RGB technology for monitors and projectors. Photocopy/print and photolithography. Photo-energetics and photovoltaic electricity. Photoelectrochemical cell, Chemical photoreactors.

Recommended literature:

G. Ertl: Reactions at Solid Surfaces, Wiley, New York, 2009
Šima J., Čeppan M., Jančovičová V., Prousek J., Velič D.: Fotochémia - Princípy a aplikácie, Vydavateľstvo STU, Bratislava, 2011

Languages necessary to complete the course:

The course is in Slovak and an alternation can be also in English.

Notes:

Past grade distribution

Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: Mgr. Táňa Sebechlebská, PhD.

Last change: 18.09.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 754

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 10

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 849

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-012/22	Physical Chemistry Seminar 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
Form of Study: seminar
Number of contact hours: per week: 2 per level/semester: 26
Method: on-site, distance or combined

Number of credits: 3

Recommended semester: 1.

Educational level: III.

Prerequisites:

Course requirements:
Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by the classification grades "passed" or "failed". The final evaluation will be "passed" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "failed" if the student submits an unacceptably weak performance corresponding to less than 60% of the maximum performance. Conditions for successful completion of the course are also regulated by the Study Regulations of PriF UK.

Learning outcomes:
Study of the topic of the assigned dissertation, methods of its research and data processing. The aim is to teach the doctoral student to work with scientific literature, interpret the results of various types of laboratory analyzes and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of the dissertation.

Class syllabus:
Status of development and planning of work on the dissertation project. Discussion on the chapters of the dissertation on the basis of set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of dissertation results with discussion in the presence of members of the department.

Recommended literature:
1. Current monographic and journal literature and information sources on the Internet.
2. Original and review articles in scientific journals.

Languages necessary to complete the course:
English or Slovak

Notes:	
Past grade distribution Total number of evaluated students: 7	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 04.11.2022	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-013/22	Physical Chemistry Seminar 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
Form of Study: seminar
Number of contact hours: per week: 2 per level/semester: 26
Method: on-site, distance or combined

Number of credits: 3

Recommended semester: 2.

Educational level: III.

Prerequisites:

Course requirements:
Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by the classification grades "passed" or "failed". The final evaluation will be "passed" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "failed" if the student submits an unacceptably weak performance corresponding to less than 60% of the maximum performance. Conditions for successful completion of the course are also regulated by the Study Regulations of PriF UK.

Learning outcomes:
Study of the topic of the assigned dissertation, methods of its research and data processing. The aim is to teach the doctoral student to work with scientific literature, interpret the results of various types of laboratory analyzes and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of the dissertation.

Class syllabus:
Status of development and planning of work on the dissertation project. Discussion on the chapters of the dissertation on the basis of set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of dissertation results with discussion in the presence of members of the department.

Recommended literature:
1. Current monographic and journal literature and information sources on the Internet.
2. Original and review articles in scientific journals.

Languages necessary to complete the course:
English or Slovak

Notes:	
Past grade distribution Total number of evaluated students: 2	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 04.11.2022	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-014/22	Physical Chemistry Seminar 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
Form of Study: seminar
Number of contact hours: per week: 2 per level/semester: 26
Method: on-site, distance or combined

Number of credits: 3

Recommended semester: 3.

Educational level: III.

Prerequisites:

Course requirements:
Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by the classification grades "passed" or "failed". The final evaluation will be "passed" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "failed" if the student submits an unacceptably weak performance corresponding to less than 60% of the maximum performance. Conditions for successful completion of the course are also regulated by the Study Regulations of PriF UK.

Learning outcomes:
Study of the topic of the assigned dissertation, methods of its research and data processing. The aim is to teach the doctoral student to work with scientific literature, interpret the results of various types of laboratory analyzes and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of the dissertation.

Class syllabus:
Status of development and planning of work on the dissertation project. Discussion on the chapters of the dissertation on the basis of set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of dissertation results with discussion in the presence of members of the department.

Recommended literature:
1. Current monographic and journal literature and information sources on the Internet.
2. Original and review articles in scientific journals.

Languages necessary to complete the course:
English or Slovak

Notes:	
Past grade distribution Total number of evaluated students: 2	
ABS	NEABS
100,0	0,0
Lecturers:	
Last change: 04.11.2022	
Approved by: prof. RNDr. Juraj Bujdák, DrSc.	

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KJ/N-DSSZ-026/22	**Course title:** Professional English 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., 3.	
Educational level: III.	
Prerequisites:	
Course requirements: Each course participant is required to achieve proficient knowledge and usage of the English grammar, professional vocabulary, reading and listening comprehension, writing professional texts and oral presentations. Credits will be awarded to students who will demonstrate active participation and deliver all set tasks and assignments successfully. The course participants will be awarded a pass or a fail upon course completion.	
Learning outcomes: Upon completion of the course, PhD students will effectively use the English language for professional purposes. They will proficiently comprehend targeted written and audio texts and present their viewpoints in required forms.	
Class syllabus: Theoretical and practical skills in professional written communication include appropriate structure of formal written texts (emails, application forms, personal statements, cover letters, abstracts, scientific articles, paraphrasing, using citations, citing sources, etc.) The course also focuses on theoretical explanation of correct delivery of oral texts, professional presentations and discussions. The course primary target is to facilitate PhD students with proficient usage of all the aspects of written and oral communication in various settings.	
Recommended literature: Armer, T.: Cambridge English for Scientists CD ROM Writing Professional English Team of authors: Test your Listening Skills: A Handbook for Science Doctoral students Team of authors: Test your Reading Skills: A Handbook for Science Doctoral students	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution
Total number of evaluated students: 404

A	ABS	B	C	D	E	FX	NEABS
0,0	99,75	0,0	0,0	0,0	0,0	0,0	0,25

Lecturers: Mgr. Aneta Barnes, RNDr. Tatiana Slováková, PhD.

Last change: 03.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-DSSZ-027/22	Professional English 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:
Each course participant is required to achieve proficient knowledge and usage of the English grammar, professional vocabulary, reading and listening comprehension, writing professional texts and oral presentations. Credits will be awarded to students who will demonstrate active participation during seminars and deliver all prior set tasks and assignments successfully. The course participants will be awarded a pass or a fail upon course completion

Learning outcomes:
Doctoral students who successfully pass the examination in Professional English 2 will be enabled to use the English language for specific purposes in all its forms effectively and sufficiently. They will thoroughly comprehend professional texts in written and/or audio form, acquire professional vocabulary and actively participate in various oral communication settings.

Class syllabus:
Theoretical and practical skills in professional writing communication in the English language as a follow up to prior gained knowledge in the previous semester encompass writing professional résumés, summaries, lay summaries, responses to job interview questions, professional CVs, comparing and contrasting in scientific articles, etc. Professional oral communication focusses on research-based scientific presentations and effectively led discussions.

Recommended literature:
Armer, T.: Cambridge English for Scientists
CD ROM Writing Professional English
Team of authors: Test your Listening Skills: A Handbook for Science Doctoral students
Team of authors: Test your Reading Skills: A Handbook for Science Doctoral students

Languages necessary to complete the course:
English

Notes:
B1 level in English is required in order to pass this course.
Seminars are held in summer semester. Number of students in one course is limited to twenty.

Students can choose from four offered time slots.

Past grade distribution
Total number of evaluated students: 138

ABS	NEABS
100,0	0,0

Lecturers: Mgr. Aneta Barnes

Last change: 03.10.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026	
University: Comenius University Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KFTCh/N-DCFC-009/22	**Course title:** Selected Topics in Colloid Chemistry

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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
Compulsory elective course completed by an examination in selected topics in Colloid Chemistry.

Learning outcomes:
Acquisition and extension of the latest theoretical knowledge in selected chapters of the subject of colloid chemistry with respect the current state of scientific field, which are prerequisite for the elaboration of a written dissertation project, successful completion of the dissertation exam and the objectives of the PhD thesis.

Class syllabus:
The course involves selected topics of colloid chemistry related to the objectives and focus scientific area of the dissertation. The exact syllabus and choice of the topics should be determined in consultation with the PhD tutor and examiner in the topics and areas related to: Synthesis and characterization of colloidal particles, optical properties of colloidal systems, adsorption at phase interfaces, structure of electrical bilayer, DLVO stability of colloidal systems, coagulation of colloidal systems, ion exchange equilibria on surfaces of colloidal particles, surfactants, systems with liquid and gaseous dispersion media. Teaching includes individual study and expert consultations in the recommended fields using available literature sources.

Recommended literature:
Determined individually according to the student's study plan, from available sources, e.g.:
Janek M. Koloidná chémia - Fyzikálna chémia povrchov jemne dispergovanej fázy. UK v Bratislave,
Prírodovedecká fakulta 2012, 138s. ISBN 978#80#223#3280#4.
Duncan J. Shaw, Introduction to Colloid and Surface Chemistry. Butterworth-Heinemann, An imprint of Elsevier

Science, Last reprint in 2000, Transferred to digital printing 2003.
Myers, D.: Surfaces, Interfaces and Colloids, Wiley-VCH, New York 1999.
Hunter R.J.: Foundations of Colloid Science. Oxford University Press 1995.
Lykema J.: Fundamentals of interface and colloid science, Academic Press, London 1995, 2000, 2005.

Languages necessary to complete the course:
The course is in Slovak or English upon agreement.

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS	NEABS
0,0	0,0

Lecturers: prof. Ing. Marián Janek, PhD.

Last change: 22.09.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-006/22	Selected Topics in Spectroscopic Methods

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
Form of teaching: No specification with regard to the doctoral degree, on-site method of educational activity for full-time form of study or online method for an external form of the study. Semináre, konzultácie a samoštúdium.
Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
Compulsory elective course completed by an examination in selected chapters of spectroscopy methods. It is evaluated with the classification grade passed or failed after passing the oral exam.

Learning outcomes:
The student will get acquainted with basics and applications of spectral methods used in the research of physical chemistry. Emphasis will be placed on methods and those parts of the application of spectral methods that the student will use in his/her dissertation work.

Class syllabus:
Selected chapters from the following areas:
• Application of spectral methods in the ultraviolet, visible and infrared regions
• Spectral methods in transmission and reflex modes
• Solid phase spectroscopy methods
• Fluorescence spectroscopy and its applications
• Spectral methods using polarized light
• Laser spectroscopy
• Resonance spectral methods
• Use of spectral methods for characterization of structure and properties of chemical systems
• Use of spectral methods in chemical kinetics
• Spectral data processing, qualitative and quantitative analysis, chemometric methods

Recommended literature:
· V. Milata, P. Segľa, Vybrané metódy molekulovej spektroskopie. STU, 2007.
· M.G. Gore. Spectrophotometry & spectrofluorimetry. Oxford University Press, 2000, Oxford.
· B. Stuard, Infrared spectroscopy; Fundamentals and applications. John Wiley & Sons, 2004.

· R. Tore, Time resolved spectroscopy in complex liquids. An experimental perspective. Springer, 2008.

Languages necessary to complete the course:
The course is in English.

Notes:

Past grade distribution
Total number of evaluated students: 3

ABS	NEABS
100,0	0,0

Lecturers: RNDr. Marek Cigáň, PhD.

Last change: 18.09.2022

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KFTCh/N-DCFC-015/24	Selected topics in Electrochemistry

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, on-site method of educational activity for full-time form of study or online method for an external form of the study. Seminars, consultations and self-study. Recommended length of educational process (in hours): Weekly: 2 For the whole period of study: 26

Number of credits: 3

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

Educational level: III.

Prerequisites:

Course requirements:
30% of the grade is a written test with exercises and 70% of the grade is an oral exam.

Learning outcomes:
By completing the course, the student will gain a broader overview of electrochemical methods and techniques, both basic and advanced. In addition to common applications in analytical chemistry, the student will become acquainted with practical applications of electrochemistry in industry, environmental chemistry, and energy storage and generation. The student will learn to analyze data obtained from measurements by solving problems and by simulating individual processes. They will also gain an overview of current topics in electrochemistry.

Class syllabus:
Thermodynamics of the electrochemical cell
Kinetics of electrode reactions – Butler – Volmer model, Marcus model
Electrochemical methods - chronovoltammetry, pulse voltammetry, linear sweep voltammetry, cyclic voltammetry, electrolysis, flow electrolysis
Influence of homogeneous kinetics and equilibrium on the interpretation of electrochemical measurements
Electric double layer and adsorption, modified electrodes
Impedance spectroscopy
Computer simulations of electrochemical processes
Environmental applications of electrochemistry
Use of electrochemistry for energy production and storage - batteries and fuel cells
Electrochemistry in conjunction with other techniques - electrochemical STM, electrochemical AFM, spectroelectrochemistry
Photoelectrochemistry - spectroelectrochemical cell, photovoltaics

Electrochemical instrumentation
New trends in electrochemistry

Recommended literature:
A.J. Bard, L.R. Faulkner: Electrochemical Methods, John Wiley & Sons.INC, 2001.

Languages necessary to complete the course:
Slovak/English

Notes:

Past grade distribution
Total number of evaluated students: 1

ABS	NEABS
100,0	0,0

Lecturers: Mgr. Táňa Sebechlebská, PhD.

Last change: 03.02.2025

Approved by: prof. RNDr. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Faculty of Natural Sciences

Course ID:	**Course title:**
PriF.KJ/N-DSSZ-024/22	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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 521

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 3

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 79

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 219

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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 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. Juraj Bujdák, DrSc.

COURSE DESCRIPTION

Academic year: 2025/2026

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: 379

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. Juraj Bujdák, DrSc.