

## Course descriptions

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## COURSE DESCRIPTION

|                                                                                                                                                                                   |       |     |                                                                                                                                   |     |     |     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |       |     |                                                                                                                                   |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |       |     |                                                                                                                                   |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |       |     |                                                                                                                                   |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-412/22                                                                                                                                           |       |     | <b>Course title:</b><br>Abstract of a contribution from a domestic or an international conference (originally AFG, AFK, AFH, AFL) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                   |     |     |     |       |
| <b>Number of credits:</b> 4                                                                                                                                                       |       |     |                                                                                                                                   |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |       |     |                                                                                                                                   |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |       |     |                                                                                                                                   |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |       |     |                                                                                                                                   |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |       |     |                                                                                                                                   |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |       |     |                                                                                                                                   |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |       |     |                                                                                                                                   |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |       |     |                                                                                                                                   |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |       |     |                                                                                                                                   |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |       |     |                                                                                                                                   |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 611                                                                                                         |       |     |                                                                                                                                   |     |     |     |       |
| A                                                                                                                                                                                 | ABS   | B   | C                                                                                                                                 | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                               | 100,0 | 0,0 | 0,0                                                                                                                               | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                 |       |     |                                                                                                                                   |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                               |       |     |                                                                                                                                   |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |       |     |                                                                                                                                   |     |     |     |       |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                          |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                          |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                          |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-010/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Advanced Chromatographic Methods |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                          |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: lecture / seminar<br>Number of contact hours: per week: 1 / 2 per level/semester: 13 / 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                          |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                          |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                          |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                          |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                          |
| <b>Course requirements:</b><br>The seminar includes the elaboration and presentation of a seminar paper. The lecture includes a final written test. The overall evaluation includes the evaluation from the final written test and the seminar. The evaluation reflects the sufficient orientation of the student in the given issue at the level: “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                          |
| <b>Learning outcomes:</b><br>The student will become familiar with the current state of theory, methodology, instrumentation and application of liquid and gas chromatography methods, as well as with other types of chromatography. He/she will gain knowledge about the latest trends in advanced chromatographic methods and their coupling into multidimensional and comprehensive systems, as well as with other analytical techniques.                                                                                                                                                                                                                                                                                                                                                                                             |                                                          |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>• Current state in the theory of chromatographic process. Methodology of scientific research work in the field of gas chromatography, liquid chromatography and supercritical fluid chromatography.</li> <li>• Gradient techniques in chromatography.</li> <li>• Chromatography instrumentation and geometry of the chromatographic experiment setup geometry. Analytical, preparative and industrial chromatography. Stationary phase programming and combined chromatographic techniques.</li> <li>• Advances in the design and application of new types of sorbents and the resulting separation mechanisms. Biocompatibility and immunosorbents.</li> </ul>                                                                                                             |                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <ul style="list-style-type: none"> <li>• Chromatographic analysis of chiral substances, isomers and labile systems of substances. Chromatographic analysis under extreme conditions. Denaturing chromatography. UHPLC. Monolithic sorbents.</li> <li>• Techniques combining chromatographic principles and separation mechanisms with each other. Techniques combining chromatographic and other separation principles.</li> <li>• Preparation of samples using chromatography. Advanced combined chromatographic separation and identification techniques. Modern strategies and approaches to separation, characterization, analysis and determination of biopolymers in complex samples. Methodology of work with advanced chromatographic techniques. Expert systems based on chromatographic techniques.</li> <li>• Microchip chromatography. Chromatography and legislation. Validation of analytical methods based on chromatographic methods.</li> </ul> |       |
| <b>Recommended literature:</b> <ol style="list-style-type: none"> <li>1. Current monographic and journal literature and information sources on the Internet.</li> <li>2. Original and review articles in scientific journals.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
| ABS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | NEABS |
| 100,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0,0   |
| <b>Lecturers:</b> prof. PharmDr. Josef Jampílek, PhD., doc. RNDr. Róbert Góra, PhD., RNDr. Jaroslav Blaško, PhD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                       |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-012/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Course title:</b><br>Advanced Detection and Identification Methods |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: lecture / seminar<br>Number of contact hours: per week: 1 / 2 per level/semester: 13 / 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                       |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                       |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                       |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                       |
| <b>Course requirements:</b><br>The seminar includes the elaboration and presentation of a seminar paper. The lecture includes a final written test. The overall evaluation includes the evaluation from the final written test and the seminar. The evaluation reflects the sufficient orientation of the student in the given issue at the level: "pass" or "fail". The final evaluation will be "pass" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "fail" if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava.                            |                                                                       |
| <b>Learning outcomes:</b><br>The student will obtain current information about the position of advanced detection and identification methods in the system of scientific knowledge and their necessary need in generating an analytical signal. Advanced detection and identification methods are often the basis of chemical analysis methods as well as qualitative and quantitative measurement of the characteristics of chemical compounds. The student will gain information about the classification of advanced detection and identification methods, the latest trends and modern applications. He/she will understand the principles of established techniques, methodologies and procedures for chemical analysis and, based on the acquired knowledge, should be able to make the right decisions in the design and solution of a laboratory experiment. |                                                                       |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>• Theoretical and experimental basis of detection and identification methods.</li> <li>• Optical methods of atomic spectrometry: AAS, AES, AFS, LIBS, XRS method; direct analysis of solid samples; atomization of substances; analytical use; advanced techniques and methods.</li> <li>• Optical methods of molecular spectrometry: UV-Vis spectrometry, Fluorescence spectrometry,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                       |

Infrared spectrometry, Raman spectrometry; formation of the electron spectrum; formation of photoluminescence spectra; formation of vibrational-rotational spectra; formation of Raman spectra; experimental optical molecular spectrometers; confirmation of substance identity and characterization of substance structure; analytical use; advanced techniques and methods.

- Mass spectrometry methods: formation of mass spectrum; ionization techniques: ESI, APCI, APPI, MALDI, EI, ICP, SIMS; ambient ionization techniques; mass analysers: magnetic sector analyser, Q, IT, TOF, Orbitrap, FT-ICR, IMS, hybrid analysers.
- Combination of advanced detection and identification methods with high-efficiency separation methods.
- Trends in the development of advanced detection and identification methods.

**Recommended literature:**

1. S. Miertuš a kol.: Atómová a molekulová spektroskopia. Alfa Bratislava, 1991.
2. V. Milata, P. Segľa: Vybrané metódy molekulovej spektrometrie, STU v Bratislave, 2007.
3. R. Halko, M. Žemberyová: Atómová spektrometria a možnosti jej kombinácie s kvapalinovou chromatografiou, Kartprint, Bratislava, 2010.
4. J. C. Lindon: Encyclopedia of Spectroscopy and Spectrometry, Academic Press, 2010.
5. De Hoffman, E. Stroobant, Mass Spectrometry: Principles and Applications. Chichester, Wiley-Interscience. 3rd ed., 2007.
6. Current monographic and journal literature and information sources of the Internet.

**Languages necessary to complete the course:**

Slovak in combination with English (study literature in Slovak and English)

**Notes:**

**Past grade distribution**

Total number of evaluated students: 3

| ABS   | NEABS |
|-------|-------|
| 100,0 | 0,0   |

**Lecturers:** doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Andrea Vojs Staňová, PhD., doc. RNDr. Róbert Bodor, PhD.

**Last change:** 17.10.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                            |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                            |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                            |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-011/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Advanced Electroseparation Methods |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                            |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: lecture / seminar<br>Number of contact hours: per week: 1 / 2 per level/semester: 13 / 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                            |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                            |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                            |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                            |
| <b>Course requirements:</b><br>The seminar includes the elaboration and presentation of a seminar paper. The lecture includes a final written test. The overall evaluation includes the evaluation from the final written test and the seminar. The evaluation reflects the sufficient orientation of the student in the given issue at the level: "pass" or "fail". The final evaluation will be "pass" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "fail" if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                            |
| <b>Learning outcomes:</b><br>The student will become familiar with the current state of theory, methodology, instrumentation and applications electroseparation methods as well as with the latest trends in advanced electroseparation methods and issue of their coupling with other analytical methods.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                            |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>· Advanced concept of electrophoretic mobility of substances. Separation mechanisms in electrophoresis. Dispersion effects. Classification and analytical aspects of electroseparation methods.</li> <li>· Electrophoretic separation systems and basic instrumentation. Capillary electrophoresis.</li> <li>· Detection in electroseparations. Column coupling technique in capillary electrophoresis. Miniaturization of electroseparation techniques. Implementation of chromatographic principles in electroseparations.</li> <li>· Combinations of electroseparation and chromatographic methods.</li> <li>· Application basis. Trace and ultratrace analysis. Electroseparations of biopolymers. Sample pretreatment in electroseparations.</li> </ul>                |                                                            |



- Two- and multidimensional electroseparations. Validation of analytical methods based on electroseparation principles.
- Trends in the development of electroseparation methods.

**Recommended literature:**

1. C. D. García, K. Y. Chumbimuni-Torres, E. Carrilho, Capillary Electrophoresis and Microchip Capillary Electrophoresis: Principles, Applications, and Limitations, John Wiley & Sons, 2013.
2. Current monographic and journal literature and information sources on the Internet.
3. Original and review articles in scientific journals.

**Languages necessary to complete the course:**

Slovak in combination with English (study literature in Slovak and English).

**Notes:**

**Past grade distribution**

Total number of evaluated students: 2

| ABS   | NEABS |
|-------|-------|
| 100,0 | 0,0   |

**Lecturers:** prof. RNDr. Marian Masár, PhD., Ing. Roman Szücs, PhD.

**Last change:** 17.10.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |     |                                                    |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|----------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                                    |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                                    |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                                    |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-505/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>Bachelor's thesis reviewer |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                    |     |     |       |
| <b>Number of credits:</b> 3                                                                                                                                                      |       |     |     |                                                    |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                                    |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                                    |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                                    |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                                    |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                                    |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                                    |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                                    |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                                    |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                                    |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 274                                                                                                        |       |     |     |                                                    |     |     |       |
| A                                                                                                                                                                                | ABS   | B   | C   | D                                                  | E   | FX  | NEABS |
| 0,0                                                                                                                                                                              | 100,0 | 0,0 | 0,0 | 0,0                                                | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                                    |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                                    |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                                    |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |     |                                                      |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                                      |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                                      |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                                      |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-504/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>Bachelor's thesis supervisor |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                      |     |     |       |
| <b>Number of credits:</b> 8                                                                                                                                                      |       |     |     |                                                      |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                                      |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                                      |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                                      |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                                      |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                                      |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                                      |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                                      |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                                      |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                                      |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 86                                                                                                         |       |     |     |                                                      |     |     |       |
| A                                                                                                                                                                                | ABS   | B   | C   | D                                                    | E   | FX  | NEABS |
| 0,0                                                                                                                                                                              | 100,0 | 0,0 | 0,0 | 0,0                                                  | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                                      |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                                      |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                                      |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                   |       |     |     |                                                                                       |     |     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|---------------------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |       |     |     |                                                                                       |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |       |     |     |                                                                                       |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |       |     |     |                                                                                       |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-414/22                                                                                                                                           |       |     |     | <b>Course title:</b><br>Completing an long-term ERASMUS+ internship (minimum 60 days) |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                                                       |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                                      |       |     |     |                                                                                       |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |       |     |     |                                                                                       |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |       |     |     |                                                                                       |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |       |     |     |                                                                                       |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |       |     |     |                                                                                       |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |       |     |     |                                                                                       |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |       |     |     |                                                                                       |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |       |     |     |                                                                                       |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |       |     |     |                                                                                       |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |       |     |     |                                                                                       |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 32                                                                                                          |       |     |     |                                                                                       |     |     |       |
| A                                                                                                                                                                                 | ABS   | B   | C   | D                                                                                     | E   | FX  | NEABS |
| 0,0                                                                                                                                                                               | 96,88 | 0,0 | 0,0 | 0,0                                                                                   | 0,0 | 0,0 | 3,13  |
| <b>Lecturers:</b>                                                                                                                                                                 |       |     |     |                                                                                       |     |     |       |
| <b>Last change:</b>                                                                                                                                                               |       |     |     |                                                                                       |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |       |     |     |                                                                                       |     |     |       |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|---------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |                                                                                                         |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |                                                                                                         |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |                                                                                                         |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-415/22                                                                                                                                   |       |     | <b>Course title:</b><br>Completion of SAIA/NŠP internship program or other equivalent (minimum 30 days) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |                                                                                                         |     |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                              |       |     |                                                                                                         |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |                                                                                                         |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |                                                                                                         |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |                                                                                                         |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |                                                                                                         |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |                                                                                                         |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |                                                                                                         |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |                                                                                                         |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |                                                                                                         |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |                                                                                                         |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 30                                                                                                  |       |     |                                                                                                         |     |     |     |       |
| A                                                                                                                                                                         | ABS   | B   | C                                                                                                       | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0 | 0,0                                                                                                     | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |                                                                                                         |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |                                                                                                         |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |                                                                                                         |     |     |     |       |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|--------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |                                                                                                                                |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |                                                                                                                                |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |                                                                                                                                |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-416/22                                                                                                                                   |       |     | <b>Course title:</b><br>Completion of a short-term foreign internship (15-30 days, and related to the topic of the PhD thesis) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                |     |     |     |       |
| <b>Number of credits:</b> 7                                                                                                                                               |       |     |                                                                                                                                |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |                                                                                                                                |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |                                                                                                                                |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |                                                                                                                                |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |                                                                                                                                |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |                                                                                                                                |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |                                                                                                                                |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |                                                                                                                                |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |                                                                                                                                |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |                                                                                                                                |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 62                                                                                                  |       |     |                                                                                                                                |     |     |     |       |
| A                                                                                                                                                                         | ABS   | B   | C                                                                                                                              | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0 | 0,0                                                                                                                            | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |                                                                                                                                |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |                                                                                                                                |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |                                                                                                                                |     |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-001/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation 1 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Without specification due to the doctoral degree of study.<br>On-site, distance or combined study method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course requirements:</b><br>The evaluation of the course is individual according to the individual study plan of the doctoral student. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance.                                                                                                                                                                                                     |                                        |
| <b>Learning outcomes:</b><br>By completing this course, the student will gain sufficient orientation in the issue of project of the dissertation in accordance with the specifics of individual topics. This body of knowledge is essential for the graduate’s well-established theoretical readiness in terms of his/her knowledge, but it also supports the development of his/her potential in a wide range of applied practice. Undoubtedly, the outcomes of education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.                                                                                                                               |                                        |
| <b>Class syllabus:</b><br>The course Dissertation 1 is a compulsory part of the doctoral student’s study activities. It acquires a sovereignly individual character due to the specifics of individual topics of the dissertation. Its basic syllabus is already evident within the individual study plan of the doctoral student. The course is important especially in terms of understanding the basic theoretical and methodological aspects of the topics of the dissertation with emphasis on self-study and consultation with the supervisor and a wide range of consultants. It participates in creating the professional potential of the doctoral student in the next (scientific) stage of his/her studies. |                                        |
| <b>Recommended literature:</b><br>Without specification due to the nature of the specific topic of the dissertation. Recommended literature is included in the doctoral student’s individual study plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

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|-----------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English) |       |
| <b>Notes:</b>                                                                                                                     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 7                                                           |       |
| ABS                                                                                                                               | NEABS |
| 100,0                                                                                                                             | 0,0   |
| <b>Lecturers:</b>                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                    |       |
| <b>Approved by:</b>                                                                                                               |       |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-002/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation 2 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Without specification due to the doctoral degree of study.<br>On-site, distance or combined study method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course requirements:</b><br>The evaluation of the course is individual according to the individual study plan of the doctoral student. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance.                                                                                                                                                                                                     |                                        |
| <b>Learning outcomes:</b><br>By passing this course, the student will achieve sufficient orientation in the project issue of the dissertation 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.                                                                                                                                               |                                        |
| <b>Class syllabus:</b><br>The course Dissertation 2 is a compulsory part of the doctoral student’s study activities. It acquires a sovereignly individual character due to the specifics of individual topics of the dissertation. Its basic syllabus is already evident within the individual study plan of the doctoral student. The course is important especially in terms of understanding the basic theoretical and methodological aspects of the topics of the dissertation with emphasis on self-study and consultation with the supervisor and a wide range of consultants. It participates in creating the professional potential of the doctoral student in the next (scientific) stage of his/her studies. |                                        |
| <b>Recommended literature:</b><br>Without specification due to the nature of the specific topic of the dissertation. Recommended literature is included in the doctoral student’s individual study plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

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|-----------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English) |       |
| <b>Notes:</b>                                                                                                                     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 5                                                           |       |
| ABS                                                                                                                               | NEABS |
| 100,0                                                                                                                             | 0,0   |
| <b>Lecturers:</b>                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                    |       |
| <b>Approved by:</b>                                                                                                               |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-003/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation 3 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Without specification due to the doctoral degree of study.<br>On-site, distance or combined study method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course requirements:</b><br>The evaluation of the course is individual according to the individual study plan of the doctoral student. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance.                                                                                                                                                                                                     |                                        |
| <b>Learning outcomes:</b><br>By completing this course, the student will gain sufficient orientation in the issue of project of the dissertation in accordance with the specifics of individual topics. This body of knowledge is essential for the graduate’s well-established theoretical readiness in terms of his/her knowledge, but it also supports the development of his/her potential in a wide range of applied practice. Undoubtedly, the outcomes of education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.                                                                                                                               |                                        |
| <b>Class syllabus:</b><br>The course Dissertation 3 is a compulsory part of the doctoral student’s study activities. It acquires a sovereignly individual character due to the specifics of individual topics of the dissertation. Its basic syllabus is already evident within the individual study plan of the doctoral student. The course is important especially in terms of understanding the basic theoretical and methodological aspects of the topics of the dissertation with emphasis on self-study and consultation with the supervisor and a wide range of consultants. It participates in creating the professional potential of the doctoral student in the next (scientific) stage of his/her studies. |                                        |
| <b>Recommended literature:</b><br>Without specification due to the nature of the specific topic of the dissertation. Recommended literature is included in the doctoral student’s individual study plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

|                                                                                                                                   |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------|
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English) |       |
| <b>Notes:</b>                                                                                                                     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 9                                                           |       |
| ABS                                                                                                                               | NEABS |
| 100,0                                                                                                                             | 0,0   |
| <b>Lecturers:</b>                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                    |       |
| <b>Approved by:</b>                                                                                                               |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-004/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation 4 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Without specification due to the doctoral degree of study.<br>On-site, distance or combined study method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course requirements:</b><br>The evaluation of the course is individual according to the individual study plan of the doctoral student. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance.                                                                                                                                                                                                     |                                        |
| <b>Learning outcomes:</b><br>By completing this course, the student will gain sufficient orientation in the issue of project of the dissertation in accordance with the specifics of individual topics. This body of knowledge is essential for the graduate’s well-established theoretical readiness in terms of his/her knowledge, but it also supports the development of his/her potential in a wide range of applied practice. Undoubtedly, the outcomes of education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.                                                                                                                               |                                        |
| <b>Class syllabus:</b><br>The course Dissertation 4 is a compulsory part of the doctoral student’s study activities. It acquires a sovereignly individual character due to the specifics of individual topics of the dissertation. Its basic syllabus is already evident within the individual study plan of the doctoral student. The course is important especially in terms of understanding the basic theoretical and methodological aspects of the topics of the dissertation with emphasis on self-study and consultation with the supervisor and a wide range of consultants. It participates in creating the professional potential of the doctoral student in the next (scientific) stage of his/her studies. |                                        |
| <b>Recommended literature:</b><br>Without specification due to the nature of the specific topic of the dissertation. Recommended literature is included in the doctoral student’s individual study plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

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| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English) |       |
| <b>Notes:</b>                                                                                                                     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 8                                                           |       |
| ABS                                                                                                                               | NEABS |
| 100,0                                                                                                                             | 0,0   |
| <b>Lecturers:</b>                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                    |       |
| <b>Approved by:</b>                                                                                                               |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-005/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation 5 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Without specification due to the doctoral degree of study.<br>On-site, distance or combined study method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course requirements:</b><br>The evaluation of the course is individual according to the individual study plan of the doctoral student. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance.                                                                                                                                                                                                     |                                        |
| <b>Learning outcomes:</b><br>By completing this course, the student will gain sufficient orientation in the issue of project of the dissertation in accordance with the specifics of individual topics. This body of knowledge is essential for the graduate’s well-established theoretical readiness in terms of his/her knowledge, but it also supports the development of his/her potential in a wide range of applied practice. Undoubtedly, the outcomes of education will also be reflected in the student’s overview in terms of methodological approaches in the subject matter.                                                                                                                               |                                        |
| <b>Class syllabus:</b><br>The course Dissertation 5 is a compulsory part of the doctoral student’s study activities. It acquires a sovereignly individual character due to the specifics of individual topics of the dissertation. Its basic syllabus is already evident within the individual study plan of the doctoral student. The course is important especially in terms of understanding the basic theoretical and methodological aspects of the topics of the dissertation with emphasis on self-study and consultation with the supervisor and a wide range of consultants. It participates in creating the professional potential of the doctoral student in the next (scientific) stage of his/her studies. |                                        |
| <b>Recommended literature:</b><br>Without specification due to the nature of the specific topic of the dissertation. Recommended literature is included in the doctoral student’s individual study plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

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| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English) |       |
| <b>Notes:</b>                                                                                                                     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 9                                                           |       |
| ABS                                                                                                                               | NEABS |
| 100,0                                                                                                                             | 0,0   |
| <b>Lecturers:</b>                                                                                                                 |       |
| <b>Last change:</b> 17.10.2022                                                                                                    |       |
| <b>Approved by:</b>                                                                                                               |       |



## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-006/22                                                                                                                          | <b>Course title:</b><br>Dissertation 6 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |                                        |
| <b>Number of credits:</b> 5                                                                                                                                               |                                        |
| <b>Recommended semester:</b> 6.                                                                                                                                           |                                        |
| <b>Educational level:</b> III.                                                                                                                                            |                                        |
| <b>Prerequisites:</b>                                                                                                                                                     |                                        |
| <b>Course requirements:</b>                                                                                                                                               |                                        |
| <b>Learning outcomes:</b>                                                                                                                                                 |                                        |
| <b>Class syllabus:</b>                                                                                                                                                    |                                        |
| <b>Recommended literature:</b>                                                                                                                                            |                                        |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |                                        |
| <b>Notes:</b>                                                                                                                                                             |                                        |
| <b>Past grade distribution</b><br>Total number of evaluated students: 9                                                                                                   |                                        |
| ABS                                                                                                                                                                       | NEABS                                  |
| 100,0                                                                                                                                                                     | 0,0                                    |
| <b>Lecturers:</b>                                                                                                                                                         |                                        |
| <b>Last change:</b>                                                                                                                                                       |                                        |
| <b>Approved by:</b>                                                                                                                                                       |                                        |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                           |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |                                        |
| <b>Course ID:</b><br>PriF.KAlCh/PriF-DSSZ-007/22                                                                                                                          | <b>Course title:</b><br>Dissertation 7 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |                                        |
| <b>Number of credits:</b> 5                                                                                                                                               |                                        |
| <b>Recommended semester:</b> 7.                                                                                                                                           |                                        |
| <b>Educational level:</b> III.                                                                                                                                            |                                        |
| <b>Prerequisites:</b>                                                                                                                                                     |                                        |
| <b>Course requirements:</b>                                                                                                                                               |                                        |
| <b>Learning outcomes:</b>                                                                                                                                                 |                                        |
| <b>Class syllabus:</b>                                                                                                                                                    |                                        |
| <b>Recommended literature:</b>                                                                                                                                            |                                        |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |                                        |
| <b>Notes:</b>                                                                                                                                                             |                                        |
| <b>Past grade distribution</b><br>Total number of evaluated students: 6                                                                                                   |                                        |
| ABS                                                                                                                                                                       | NEABS                                  |
| 100,0                                                                                                                                                                     | 0,0                                    |
| <b>Lecturers:</b>                                                                                                                                                         |                                        |
| <b>Last change:</b>                                                                                                                                                       |                                        |
| <b>Approved by:</b>                                                                                                                                                       |                                        |

## STATE EXAM DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                           |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                           |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                           |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-400/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Dissertation Exam |
| <b>Number of credits:</b> 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                           |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |
| <b>Course requirements:</b><br><p>The evaluation of the course takes place within the state exam in accordance with the Study regulations of the Faculty of Natural Sciences of Comenius university in Bratislava and after the submission of the written work for the dissertation exam within the set deadline. The courses of the state exam include an elaboration of the written work for the dissertation exam (prepared by the doctoral student) and other courses of the oral exam (ad hoc) approved by the Dean. The evaluation is standard and reflects the sufficient orientation of the student in the given issue. The conditions for successful course completion are in accordance with the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. The dissertation exam is assessed as a whole by classification levels “pass” or “fail”.</p>                                                                   |                                           |
| <b>Learning outcomes:</b><br><p>The aim of the course is to acquire basic skills and cultural-ethical aspects of working with scientific literature, evaluation and systematization of studied knowledge. The doctoral student has to successfully pass the dissertation exam according to the Act on Higher Education, and the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |
| <b>Class syllabus:</b><br><p>The main output is the elaboration of the written work for the dissertation exam and its successful defence in accordance with the Study Regulations of Doctoral Studies at the Faculty of Natural Sciences of Comenius University in Bratislava. The form and content of the written work is regulated by article 34, paragraph 4 of the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. The dissertation exam consists of a part consisting of an elaboration of the written work for the dissertation exam and a part in which the doctoral student has to demonstrate theoretical knowledge according to the focus of the dissertation topic. The composition of the examination commission, the appointment of the opponent and the course of the dissertation exam are governed by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava.</p> |                                           |
| <b>State exam syllabus:</b><br><p>State exam within the study programme.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                           |
| <b>Languages necessary to complete the course:</b><br><p>Slovak in combination with English (study literature in Slovak and English)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
| <b>Notes:</b><br><p>Compulsory and other compulsory optional courses of the study part according to the accreditation file and the individual study plan of the doctoral student. The application for the dissertation exam must be submitted within 18 months of enrolment for internal form (30 months in external form).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                           |

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| <b>Last change:</b> 07.11.2022 |
| <b>Approved by:</b>            |

## STATE EXAM DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |
| <b>Course ID:</b><br>PriF.KAlCh/N-DSSZ-303/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Course title:</b><br>Dissertation's Thesis Defence |
| <b>Number of credits:</b> 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |
| <b>Course requirements:</b><br>The evaluation of the course takes place within the state exam in accordance with the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava, after the submission of the dissertation (as a final thesis). The evaluation is standard and reflects the sufficient orientation of the student in the given issue of the dissertation. The conditions for successful completion of the course are in accordance with the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. The defence of the dissertation is assessed by classification levels "pass" or "fail".                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |
| <b>Learning outcomes:</b><br>The aim of the course is to make use of theoretical, methodological and applied knowledge of doctoral study in the elaboration, subsequent defence of the dissertation and thus the successful completion of doctoral studies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |
| <b>Class syllabus:</b><br>With the dissertation, the student demonstrates the ability and readiness for independent scientific and creative activity in the field of research or development or for independent theoretical and creative artistic activity. It should be characterized by a high degree of analysis and synthesis of knowledge, as well as a sufficient overview of the existing literature. The work must be original, created by the author in compliance with the rules of working with information sources. The work must not have the character of plagiarism and must not infringe the copyrights of other authors. The author is obliged to thoroughly cite the used information sources, to state the names and specific results of research by other authors or team of authors by citing the relevant source, to accurately describe used methods and working procedures of other authors or team of authors, to document laboratory results and field research of other authors or team of authors. The citation technique is guided by the practice in the given scientific field, respecting the relevant norms and standards. |                                                       |
| <b>State exam syllabus:</b><br>Defence of the dissertation within the study programme.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                       |
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                       |
| <b>Notes:</b><br>Prerequisites are defined in the individual study plan of the doctoral student and in the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                       |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-013/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Doctoral Seminar in Analytical Chemistry 1 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: seminar<br>Number of contact hours:<br>per week: 2 per level/semester: 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                    |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                    |
| <b>Course requirements:</b><br>Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                                    |
| <b>Learning outcomes:</b><br>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 analyses, and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of his/her dissertation.                                                                                                                                                                                                                                                                         |                                                                    |
| <b>Class syllabus:</b><br>Status of development and planning of work on the project of the dissertation. Discussion on the chapters of the dissertation based on the set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of the results of the dissertation with discussion in the presence of members of the department.                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Recommended literature:</b><br>1. D. Meško, D. Katuščák, J. Findra, Akademická príručka. Osveta, Martin, 2013.<br>2. Current monographic and journal literature and information sources on the Internet.<br>3. Original and review articles in scientific journals.                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Languages necessary to complete the course:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                    |

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| Slovak in combination with English (study literature in Slovak and English)                                                                                                                 |       |
| <b>Notes:</b>                                                                                                                                                                               |       |
| <b>Past grade distribution</b>                                                                                                                                                              |       |
| Total number of evaluated students: 7                                                                                                                                                       |       |
| ABS                                                                                                                                                                                         | NEABS |
| 100,0                                                                                                                                                                                       | 0,0   |
| <b>Lecturers:</b> prof. RNDr. Marian Masár, PhD., prof. PharmDr. Josef Jampilek, PhD., doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Andrea Vojs Staňová, PhD., doc. RNDr. Róbert Bodor, PhD. |       |
| <b>Last change:</b> 17.10.2022                                                                                                                                                              |       |
| <b>Approved by:</b>                                                                                                                                                                         |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-014/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Doctoral Seminar in Analytical Chemistry 2 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: seminar<br>Number of contact hours: per week: 2 per level/semester: 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                    |
| <b>Course requirements:</b><br>Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                                    |
| <b>Learning outcomes:</b><br>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 analyses, and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of his/her dissertation.                                                                                                                                                                                                                                                                         |                                                                    |
| <b>Class syllabus:</b><br>Status of development and planning of work on the project of the dissertation. Discussion on the chapters of the dissertation based on the set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of the results of the dissertation with discussion in the presence of members of the department.                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Recommended literature:</b><br>1. D. Meško, D. Katuščák, J. Findra, Akademická príručka. Osveta, Martin, 2013.<br>2. Current monographic and journal literature and information sources on the Internet.<br>3. Original and review articles in scientific journals.                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |



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| <b>Notes:</b>                                                                                                                                                                               |       |
| <b>Past grade distribution</b>                                                                                                                                                              |       |
| Total number of evaluated students: 5                                                                                                                                                       |       |
| ABS                                                                                                                                                                                         | NEABS |
| 100,0                                                                                                                                                                                       | 0,0   |
| <b>Lecturers:</b> prof. RNDr. Marian Masár, PhD., prof. PharmDr. Josef Jampílek, PhD., doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Andrea Vojs Staňová, PhD., doc. RNDr. Róbert Bodor, PhD. |       |
| <b>Last change:</b> 17.10.2022                                                                                                                                                              |       |
| <b>Approved by:</b>                                                                                                                                                                         |       |

## COURSE DESCRIPTION

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-015/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Doctoral Seminar in Analytical Chemistry 3 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: seminar<br>Number of contact hours: per week: 2 per level/semester: 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                    |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                    |
| <b>Course requirements:</b><br>Active participation in seminars, presentation of the topic and partial results of the dissertation. Completion of the course is assessed by classification levels “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                                    |
| <b>Learning outcomes:</b><br>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 analyses, and critically evaluate their limits. The doctoral student will learn to present and discuss the partial results of his/her dissertation.                                                                                                                                                                                                                                                                         |                                                                    |
| <b>Class syllabus:</b><br>Status of development and planning of work on the project of the dissertation. Discussion on the chapters of the dissertation based on the set objectives. Formal and content shortcomings of the dissertation. Presentation and evaluation of the results of the dissertation with discussion in the presence of members of the department.                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Recommended literature:</b><br>1. D. Meško, D. Katuščák, J. Findra, Akademická príručka. Osveta, Martin, 2013.<br>2. Current monographic and journal literature and information sources on the Internet.<br>3. Original and review articles in scientific journals.                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                    |

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| <b>Notes:</b>                                                                                                                                                                               |       |
| <b>Past grade distribution</b>                                                                                                                                                              |       |
| Total number of evaluated students: 9                                                                                                                                                       |       |
| ABS                                                                                                                                                                                         | NEABS |
| 100,0                                                                                                                                                                                       | 0,0   |
| <b>Lecturers:</b> prof. RNDr. Marian Masár, PhD., prof. PharmDr. Josef Jampilek, PhD., doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Andrea Vojs Staňová, PhD., doc. RNDr. Róbert Bodor, PhD. |       |
| <b>Last change:</b> 17.10.2022                                                                                                                                                              |       |
| <b>Approved by:</b>                                                                                                                                                                         |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|-------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                                                   |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                                                   |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                                                   |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-400/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>Grant CU or Grant SAS or equivalent grant |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                                   |     |     |       |
| <b>Number of credits:</b> 12                                                                                                                                                     |       |     |     |                                                                   |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                                                   |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                                                   |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                                                   |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                                                   |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                                                   |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                                                   |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                                                   |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                                                   |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                                                   |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 174                                                                                                        |       |     |     |                                                                   |     |     |       |
| A                                                                                                                                                                                | ABS   | B   | C   | D                                                                 | E   | FX  | NEABS |
| 0,0                                                                                                                                                                              | 100,0 | 0,0 | 0,0 | 0,0                                                               | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                                                   |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                                                   |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                                                   |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                  |     |     |     |                                                                                |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |     |     |     |                                                                                |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |     |     |     |                                                                                |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-413/22                                                                                                                                          |     |     |     | <b>Course title:</b><br>Intellectual Property Rights Document (originally AGJ) |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |     |     |     |                                                                                |     |     |       |
| <b>Number of credits:</b> 10                                                                                                                                                     |     |     |     |                                                                                |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |     |     |     |                                                                                |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |     |     |     |                                                                                |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |     |     |     |                                                                                |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |     |     |     |                                                                                |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |     |     |     |                                                                                |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |     |     |     |                                                                                |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |     |     |     |                                                                                |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |     |     |     |                                                                                |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |     |     |     |                                                                                |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |     |     |     |                                                                                |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |     |     |     |                                                                                |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |     |     |     |                                                                                |     |     |       |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                  |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                  |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-004/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Methodology of Chemical Analysis of Biological and Environmental Systems |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: lecture / seminar<br>Number of contact hours: per week: 1 / 2 per level/semester: 13 / 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                  |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                  |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                  |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                  |
| <b>Course requirements:</b><br>The seminar includes the elaboration and presentation of a seminar paper. The lecture includes a final written test. The overall evaluation includes the evaluation from the final written test and the seminar. The evaluation reflects the sufficient orientation of the student in the given issue at the level: "pass" or "fail". The final evaluation will be "pass" if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be "fail" if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                                                                  |
| <b>Learning outcomes:</b><br>The student will gain the ability to take an independent, systemic and creative approach to solving problems of design and implementation of effective analytical procedures with emphasis on the sampling and pretreatment of biological and environmental samples in close connection with the chosen principle of analytical measurement, evaluation of results and their reliable interpretation. The student will understand that biological / environmental sample research is a multidisciplinary science that requires a combination of biological information and analytical knowledge.                                                                                                                                                                                                             |                                                                                                  |
| <b>Class syllabus:</b><br>· Methodology for recognizing and defining an analytical problem, considerations preceding the design of an analytical procedure, planning an experiment with respect to objectives, defining criteria for evaluating quality of analytical procedures for analysis of complex biological and environmental systems. Chiral nature of biological systems environment. Biological variability.<br>· Principles of sampling from complex biological and environmental systems, specifics of sampling,                                                                                                                                                                                                                                                                                                             |                                                                                                  |

| <p>sample processing / preparation, sample handling, archiving and processing of samples intended for ultratrace and trace multicomponent analysis of complex mixtures of substances. Specifics of working with a sample intended for microanalysis. Principles and advanced techniques of micromanipulation. Nanostructured environments and their use in chemical analysis.</p> <ul style="list-style-type: none"> <li>· Experiment, its need and characteristics. Qualitative and quantitative observation. Invasive/ destructive methodologies vs. non-destructive methodologies. Instrument calibration, methodology validation.</li> <li>· The latest trends and strategies for the application of green principles in chemical analysis - green analytical chemistry.</li> <li>· Chemical analysis and information flow, analytical information and interpretation of the analysis result. Methodology of quality control of the result of chemical analysis. Analytical chemistry and legislation. Standardization, normative and regulatory activity in life sciences and environmental sciences conditioned by the results of chemical analysis.</li> </ul> |       |     |       |      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------|------|------|
| <p><b>Recommended literature:</b></p> <ol style="list-style-type: none"> <li>1. I. Hulín et al., Úvod do vedeckého bádania 1, Vol. 1, Slovak Academic Press, Bratislava, 2003.</li> <li>2. I. Hulín et al., Úvod do vedeckého bádania 2, Pro Litera, Bratislava, 2009.</li> <li>3. Current monographic and journal literature and information sources on the Internet.</li> <li>4. Instructions and principles of writing and submitting manuscripts of scientific publications on the pages of scientific journals.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |     |       |      |      |
| <p><b>Languages necessary to complete the course:</b><br/>Slovak in combination with English (study literature in Slovak and English)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |     |       |      |      |
| <p><b>Notes:</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |     |       |      |      |
| <p><b>Past grade distribution</b><br/>Total number of evaluated students: 8</p> <table> <tr> <th>ABS</th><th>NEABS</th></tr> <tr> <td>87,5</td><td>12,5</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       | ABS | NEABS | 87,5 | 12,5 |
| ABS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NEABS |     |       |      |      |
| 87,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 12,5  |     |       |      |      |
| <p><b>Lecturers:</b> prof. PharmDr. Josef Jampílek, PhD., doc. RNDr. Radoslav Halko, PhD.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |     |       |      |      |
| <p><b>Last change:</b> 17.10.2022</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |     |       |      |      |
| <p><b>Approved by:</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |     |       |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                         |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                         |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                         |
| <b>Course ID:</b><br>PriF.KAlCh/N-DCAL-005/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Miniaturized Analytical Systems |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                         |
| <b>Type, volume, methods and workload of the student - additional information</b><br>Form of study: lecture / seminar<br>Number of contact hours: per week: 1 / 2 per level/semester: 13 / 26<br>Study method: on-site, distance or combined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                         |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                         |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                         |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                         |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                         |
| <b>Course requirements:</b><br>The seminar includes the elaboration and presentation of a seminar paper. The lecture includes a final written test. The overall evaluation includes the evaluation from the final written test and the seminar. The evaluation reflects the sufficient orientation of the student in the given issue at the level: “pass” or “fail”. The final evaluation will be “pass” if the student submits a minimum performance corresponding to 60% of the maximum performance. The final evaluation will be “fail” if the student submits an unacceptably poor performance corresponding to less than 60% of the maximum performance. The conditions for successful completion of the course are also regulated by the Study Regulations of the Faculty of Natural Sciences of Comenius University in Bratislava. |                                                         |
| <b>Learning outcomes:</b><br>The student will expand his/her knowledge in the field of miniaturized analytical systems. He/she will become familiar with the current state of theory, methodology, instrumentation and application of miniaturized analytical systems. He/she will get information about new trends in the field of miniaturized analytical systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                         |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>· General analytical procedure and its relation to analytical systems.</li> <li>· The lab-on-a-chip concept. Miniaturization in analytical chemistry.</li> <li>· Technological tools for the implementation of miniaturized analytical modules and systems.</li> <li>· Electrophoretic and chromatographic separations in miniaturized separation systems and on microchips. Instrumentation for miniaturized separation systems.</li> <li>· Detection in miniaturized systems. Miniaturized spectral, optical and electroanalytical detection systems.</li> <li>· Miniaturization and pretreatment of analytical samples.</li> <li>· Integration of basic modules into miniaturized analytical systems.</li> </ul>                                                         |                                                         |



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| · Analytical applications of miniaturized systems. Analysis of micro- and submicroobjects.                                                                                                                                                                                                                                                                                                                             |       |
| <b>Recommended literature:</b><br>1. A. Castro, A. Escarpa, B. Simonet, Miniaturization of Analytical Systems: Principles, Designs and Applications, John Wiley & Sons, 2009.<br>2. J. P. Kutter, Separation Methods in Microanalytical Systems, CRC Press, 2005.<br>3. Current monographic and journal literature and information sources on the Internet.<br>4. Original and review articles in scientific journals. |       |
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (study literature in Slovak and English)                                                                                                                                                                                                                                                                                      |       |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                          |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 5                                                                                                                                                                                                                                                                                                                                                |       |
| ABS                                                                                                                                                                                                                                                                                                                                                                                                                    | NEABS |
| 100,0                                                                                                                                                                                                                                                                                                                                                                                                                  | 0,0   |
| <b>Lecturers:</b> prof. RNDr. Marian Masár, PhD.                                                                                                                                                                                                                                                                                                                                                                       |       |
| <b>Last change:</b> 17.10.2022                                                                                                                                                                                                                                                                                                                                                                                         |       |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                    |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |     |                                          |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                          |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                          |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                          |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-508/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>Other activities |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                          |     |     |       |
| <b>Number of credits:</b> 1                                                                                                                                                      |       |     |     |                                          |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                          |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                          |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                          |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                          |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                          |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                          |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                          |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                          |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                          |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 475                                                                                                        |       |     |     |                                          |     |     |       |
| A                                                                                                                                                                                | ABS   | B   | C   | D                                        | E   | FX  | NEABS |
| 0,0                                                                                                                                                                              | 100,0 | 0,0 | 0,0 | 0,0                                      | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                          |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                          |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                          |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |     |                                                                                          |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|------------------------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                                                                          |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                                                                          |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                                                                          |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-501/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>P1 Pedagogical output as a whole (originally ACA, ACB, BCI, BCB) |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                                                          |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                                     |       |     |     |                                                                                          |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                                                                          |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                                                                          |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                                                                          |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                                                                          |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                                                                          |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                                                                          |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                                                                          |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                                                                          |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                                                                          |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                                                                          |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                                                                          |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                                                                          |     |     |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|--------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |     |     |     |                                                                          |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |     |     |     |                                                                          |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |     |     |     |                                                                          |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-503/22                                                                                                                                          |     |     |     | <b>Course title:</b><br>P2 Pedagogical output as a part (originally BCK) |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |     |     |     |                                                                          |     |     |       |
| <b>Number of credits:</b> 10                                                                                                                                                     |     |     |     |                                                                          |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |     |     |     |                                                                          |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |     |     |     |                                                                          |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |     |     |     |                                                                          |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |     |     |     |                                                                          |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |     |     |     |                                                                          |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |     |     |     |                                                                          |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |     |     |     |                                                                          |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |     |     |     |                                                                          |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |     |     |     |                                                                          |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |     |     |     |                                                                          |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |     |     |     |                                                                          |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |     |     |     |                                                                          |     |     |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |     |     |                                                                             |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |     |     |                                                                             |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |     |     |                                                                             |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-502/22                                                                                                                                          |     |     | <b>Course title:</b><br>P2 Pedagogical output as part (originally ACC, ACD) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |     |     |                                                                             |     |     |     |       |
| <b>Number of credits:</b> 15                                                                                                                                                     |     |     |                                                                             |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |     |     |                                                                             |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |     |     |                                                                             |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |     |     |                                                                             |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |     |     |                                                                             |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |     |     |                                                                             |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |     |     |                                                                             |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |     |     |                                                                             |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |     |     |                                                                             |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |     |     |                                                                             |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |     |     |                                                                             |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |     |     |                                                                             |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |     |     |                                                                             |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                           |       |     |     |                                                                                                          |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|----------------------------------------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |     |                                                                                                          |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |     |                                                                                                          |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |     |                                                                                                          |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-507/22                                                                                                                                   |       |     |     | <b>Course title:</b><br>Pedagogical activity (4 hours/WS and 4 hours/SS) or alternative pedagogical work |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |     |                                                                                                          |     |     |       |
| <b>Number of credits:</b> 2                                                                                                                                               |       |     |     |                                                                                                          |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |     |                                                                                                          |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |     |                                                                                                          |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |     |                                                                                                          |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |     |                                                                                                          |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |     |                                                                                                          |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |     |                                                                                                          |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |     |                                                                                                          |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |     |                                                                                                          |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |     |                                                                                                          |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 497                                                                                                 |       |     |     |                                                                                                          |     |     |       |
| A                                                                                                                                                                         | ABS   | B   | C   | D                                                                                                        | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0 | 0,0 | 0,0                                                                                                      | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |     |                                                                                                          |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |     |                                                                                                          |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |     |                                                                                                          |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-026/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Professional English 1 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>Course requirements:</b><br>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.                                                                                                                          |                                                |
| <b>Learning outcomes:</b><br>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.                                                                                                                                                                                                                                                                                                                                      |                                                |
| <b>Class syllabus:</b><br>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. |                                                |
| <b>Recommended literature:</b><br>Armer, T.: Cambridge English for Scientists<br>CD ROM Writing Professional English<br>Team of authors: Test your Listening Skills: A Handbook for Science Doctoral students<br>Team of authors: Test your Reading Skills: A Handbook for Science Doctoral students                                                                                                                                                                                                                                                                                                  |                                                |
| <b>Languages necessary to complete the course:</b><br>English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                |

|                                                                    |       |     |     |     |     |     |       |
|--------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-------|
| <b>Past grade distribution</b>                                     |       |     |     |     |     |     |       |
| Total number of evaluated students: 180                            |       |     |     |     |     |     |       |
| A                                                                  | ABS   | B   | C   | D   | E   | FX  | NEABS |
| 0,0                                                                | 100,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b> Mgr. Aneta Barnes, RNDr. Tatiana Slov kov , PhD. |       |     |     |     |     |     |       |
| <b>Last change:</b> 03.10.2022                                     |       |     |     |     |     |     |       |
| <b>Approved by:</b>                                                |       |     |     |     |     |     |       |



## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-027/22                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Course title:</b><br>Professional English 2 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                |
| <b>Course requirements:</b><br>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 |                                                |
| <b>Learning outcomes:</b><br>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.                                                                                 |                                                |
| <b>Class syllabus:</b><br>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.  |                                                |
| <b>Recommended literature:</b><br>Armer, T.: Cambridge English for Scientists<br>CD ROM Writing Professional English<br>Team of authors: Test your Listening Skills: A Handbook for Science Doctoral students<br>Team of authors: Test your Reading Skills: A Handbook for Science Doctoral students                                                                                                                                                                                              |                                                |
| <b>Languages necessary to complete the course:</b><br>English                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Notes:</b><br>B1 level in English is required in order to pass this course.<br>Seminars are held in summer semester. Number of students in one course is limited to twenty.                                                                                                                                                                                                                                                                                                                    |                                                |

|                                                   |       |
|---------------------------------------------------|-------|
| Students can choose from four offered time slots. |       |
| <b>Past grade distribution</b>                    |       |
| Total number of evaluated students: 88            |       |
| ABS                                               | NEABS |
| 100,0                                             | 0,0   |
| <b>Lecturers:</b> Mgr. Aneta Barnes               |       |
| <b>Last change:</b> 03.10.2022                    |       |
| <b>Approved by:</b>                               |       |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|-----------------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |       |     |     |                                                                                   |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |       |     |     |                                                                                   |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |       |     |     |                                                                                   |     |     |       |
| <b>Course ID:</b><br>PriF.KDPP/N-DSSZ-500/22                                                                                                                                      |       |     |     | <b>Course title:</b><br>Selected topics from university pedagogy for non-teachers |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                                                   |     |     |       |
| <b>Number of credits:</b> 3                                                                                                                                                       |       |     |     |                                                                                   |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |       |     |     |                                                                                   |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |       |     |     |                                                                                   |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |       |     |     |                                                                                   |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |       |     |     |                                                                                   |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |       |     |     |                                                                                   |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |       |     |     |                                                                                   |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |       |     |     |                                                                                   |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |       |     |     |                                                                                   |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |       |     |     |                                                                                   |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 12                                                                                                          |       |     |     |                                                                                   |     |     |       |
| A                                                                                                                                                                                 | ABS   | B   | C   | D                                                                                 | E   | FX  | NEABS |
| 0,0                                                                                                                                                                               | 91,67 | 0,0 | 0,0 | 0,0                                                                               | 0,0 | 0,0 | 8,33  |
| <b>Lecturers:</b> RNDr. Jana Ciceková, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., PhDr.<br>ThLic. Peter Ikhardt, PhD.                                                        |       |     |     |                                                                                   |     |     |       |
| <b>Last change:</b> 30.09.2022                                                                                                                                                    |       |     |     |                                                                                   |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |       |     |     |                                                                                   |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-022/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Slovak for Foreign Doctoral Students 1 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                |
| <b>Recommended semester:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                |
| <b>Course requirements:</b><br>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.<br>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.<br>Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination. |                                                                |
| <b>Learning outcomes:</b><br>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.<br>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.                                                                                                                                           |                                                                |
| <b>Class syllabus:</b><br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1 (Lekcia: 1-5). UK v Bratislave, 2012.<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica<br>Audio program: <a href="https://uniba.sk/krizom-krazom">https://uniba.sk/krizom-krazom</a><br>Worksheets, website: <a href="https://slovake.eu/sk">https://slovake.eu/sk</a>                                                                                                                                                                                                                                                                                                        |                                                                |
| <b>Recommended literature:</b><br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1 (Lekcia: 1-5). UK v Bratislave, 2012.<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica<br>Audio program: <a href="https://uniba.sk/krizom-krazom">https://uniba.sk/krizom-krazom</a><br>Worksheets, website: <a href="https://slovake.eu/sk">https://slovake.eu/sk</a>                                                                                                                                                                                                                                                                                                |                                                                |

|                                                                                                                                               |       |     |     |     |     |     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-------|
| <b>Languages necessary to complete the course:</b><br>Slovak in combination with English (the study literature is in both Slovak and English) |       |     |     |     |     |     |       |
| <b>Notes:</b><br>It is possible to register for the course just once. Students may begin in either the Summer or Winter semester.             |       |     |     |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 41                                                                      |       |     |     |     |     |     |       |
| A                                                                                                                                             | ABS   | B   | C   | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                           | 100,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b> Mgr. Karin Rózsová Wolfová                                                                                                  |       |     |     |     |     |     |       |
| <b>Last change:</b> 28.09.2022                                                                                                                |       |     |     |     |     |     |       |
| <b>Approved by:</b>                                                                                                                           |       |     |     |     |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-023/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Course title:</b><br>Slovak for Foreign Doctoral Students 2 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |
| <b>Recommended semester:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |
| <b>Course requirements:</b><br>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.<br>Number of credits: 3 credits<br>Recommended semester/trimester of study: from 1st to 8th semester<br>Level of study: third<br>Subject conditions: Slovak for Foreign Doctoral Students 1<br>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.<br>Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination. |                                                                |
| <b>Learning outcomes:</b><br>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.                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Class syllabus:</b><br>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.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                |
| <b>Recommended literature:</b><br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, workbook<br>Audio program: <a href="https://uniba.sk/krizom-krazom">https://uniba.sk/krizom-krazom</a><br>Worksheets are prepared by the course instructor.<br>Portal: <a href="https://slovake.eu/sk">https://slovake.eu/sk</a>                                                                                                                                                                                                                                                                                                                                                  |                                                                |
| <b>Languages necessary to complete the course:</b><br>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: 28

| 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:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-024/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Course title:</b><br>Slovak for Foreign Doctoral Students 3 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |
| <b>Recommended semester:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |
| <b>Course requirements:</b><br>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.<br>Number of credits: 3 credits<br>Recommended semester/trimester of study: from 1st to 8th semester<br>Level of study: third<br>Subject conditions: Slovak for Foreign Doctoral Students 2<br>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.<br>Scale of assessment (preliminary/final): Credits will not be awarded to students who receive less than 60% on the final examination. |                                                                |
| <b>Learning outcomes:</b><br>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                                                                                                                                                                                                                                                                                                                                                                      |                                                                |
| <b>Class syllabus:</b><br>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.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                |
| <b>Recommended literature:</b><br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1, A2<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, workbook<br>Audio program: <a href="https://uniba.sk/krizom-krazom">https://uniba.sk/krizom-krazom</a><br>Worksheets are prepared by the course instructor.<br>Portal: <a href="https://slovakie.eu/sk">https://slovakie.eu/sk</a>                                                                                                                                                                                                                                                                                                                                            |                                                                |
| <b>Languages necessary to complete the course:</b><br>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: 27

| 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:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                |
| <b>Course ID:</b><br>PriF.KJ/N-DSSZ-028/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Course title:</b><br>Slovak for Foreign Doctoral Students 4 |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week: per level/semester:</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                              |                                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                |
| <b>Recommended semester:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                |
| <b>Educational level:</b> III.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |
| <b>Course requirements:</b><br>Grading (Assessment/Evaluation):<br>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.                                                                                                                                                             |                                                                |
| <b>Learning outcomes:</b><br>Objectives and outcomes:<br>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.<br>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. |                                                                |
| <b>Class syllabus:</b><br>Brief outline of the course:<br>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.                                                                                   |                                                                |
| <b>Recommended literature:</b><br>Recommended literature:<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1. UK v Bratislave, 2012.<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A2. (Lekcia 1-4). UK v Bratislave, 2012.<br>Kamenárová, R. a kol.: Krížom-krážom, Slovenčina A1+A2, cvičebnica<br>Audio program: <a href="https://uniba.sk/krizom-krazom">https://uniba.sk/krizom-krazom</a><br>Worksheets, website: <a href="https://slovake.eu/sk">https://slovake.eu/sk</a>                                                 |                                                                |
| <b>Languages necessary to complete the course:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                |

|                                                                                                     |       |     |     |     |     |     |       |
|-----------------------------------------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-------|
| Language of instruction:<br>Slovak in combination with English (the study literature is in Slovak). |       |     |     |     |     |     |       |
| <b>Notes:</b>                                                                                       |       |     |     |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b> Mgr. Karin Rózsová Wolfová                                                        |       |     |     |     |     |     |       |
| <b>Last change:</b> 18.10.2022                                                                      |       |     |     |     |     |     |       |
| <b>Approved by:</b>                                                                                 |       |     |     |     |     |     |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |     |                                                            |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |     |                                                            |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |     |                                                            |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-506/22                                                                                                                                          |       |     |     | <b>Course title:</b><br>Supervisor of the SSC contribution |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |     |                                                            |     |     |       |
| <b>Number of credits:</b> 4                                                                                                                                                      |       |     |     |                                                            |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |     |                                                            |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |     |                                                            |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |     |                                                            |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |     |                                                            |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |     |                                                            |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |     |                                                            |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |     |                                                            |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |     |                                                            |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |     |                                                            |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |     |                                                            |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |     |                                                            |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |     |                                                            |     |     |       |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |     |     |                                                                                                                                     |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |     |     |                                                                                                                                     |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |     |     |                                                                                                                                     |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-404/22                                                                                                                                           |     |     | <b>Course title:</b><br>V1 Scientific output as a whole - ESB monograph (originally AAA, ABA), individual authorship less than 3 AH |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |     |     |                                                                                                                                     |     |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                                      |     |     |                                                                                                                                     |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |     |     |                                                                                                                                     |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |     |     |                                                                                                                                     |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |     |     |                                                                                                                                     |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |     |     |                                                                                                                                     |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |     |     |                                                                                                                                     |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |     |     |                                                                                                                                     |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |     |     |                                                                                                                                     |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |     |     |                                                                                                                                     |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |     |     |                                                                                                                                     |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                 |     |     |                                                                                                                                     |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                               |     |     |                                                                                                                                     |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |     |     |                                                                                                                                     |     |     |     |       |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |                                                                                                                                        |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |                                                                                                                                        |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |                                                                                                                                        |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-401/22                                                                                                                                   |       |     | <b>Course title:</b><br>V1 Scientific output as a whole – ESB monograph (originally AAA, ABA), individual authorship share $\geq 3$ AH |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                        |     |     |     |       |
| <b>Number of credits:</b> 30                                                                                                                                              |       |     |                                                                                                                                        |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |                                                                                                                                        |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |                                                                                                                                        |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |                                                                                                                                        |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |                                                                                                                                        |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |                                                                                                                                        |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |                                                                                                                                        |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |                                                                                                                                        |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |                                                                                                                                        |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |                                                                                                                                        |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |                                                                                                                                        |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |                                                                                                                                        |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |                                                                                                                                        |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |                                                                                                                                                          |     |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |                                                                                                                                                          |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-405/22                                                                                                                                          |       |     | <b>Course title:</b><br>V2 Scientific output as part - study in ESB or collection<br>(originally AAB, ABA, ABB), individual authorship less than 3<br>AH |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                                     |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |                                                                                                                                                          |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |                                                                                                                                                          |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                   |     |     |                                                                                                                                                          |     |     |     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |     |     |                                                                                                                                                          |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-402/22                                                                                                                                           |     |     | <b>Course title:</b><br>V2 Scientific output as part - study in ESB or collection<br>(originally AAB, ABA, ABB), individual authorship share $\geq 3$ AH |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Number of credits:</b> 30                                                                                                                                                      |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                                 |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                               |     |     |                                                                                                                                                          |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |     |     |                                                                                                                                                          |     |     |     |       |



## COURSE DESCRIPTION

|                                                                                                                                                                           |       |     |                                                                                                                                                                          |     |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-411/22                                                                                                                                   |       |     | <b>Course title:</b><br>V2 Scientific output as part of ESB, collection - contribution in peer reviewed scientific collection, monograph (originally AEC, AFA, AFC, AED) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Number of credits:</b> 6                                                                                                                                               |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 333                                                                                                 |       |     |                                                                                                                                                                          |     |     |     |       |
| A                                                                                                                                                                         | ABS   | B   | C                                                                                                                                                                        | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0 | 0,0                                                                                                                                                                      | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |                                                                                                                                                                          |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |                                                                                                                                                                          |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                           |       |     |     |                                                                                                                                              |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----|----------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |     |                                                                                                                                              |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |     |                                                                                                                                              |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |     |                                                                                                                                              |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-406/22                                                                                                                                   |       |     |     | <b>Course title:</b><br>V3 Scientific output as a part - study in a journal (originally AAB, ABA, ABB), individual authorship less than 3 AH |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |     |                                                                                                                                              |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                              |       |     |     |                                                                                                                                              |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |     |                                                                                                                                              |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |     |                                                                                                                                              |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |     |                                                                                                                                              |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |     |                                                                                                                                              |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |     |                                                                                                                                              |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |     |                                                                                                                                              |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |     |                                                                                                                                              |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |     |                                                                                                                                              |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |     |                                                                                                                                              |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |     |                                                                                                                                              |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |     |                                                                                                                                              |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |     |                                                                                                                                              |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                           |     |     |                                                                                                                                           |     |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |     |     |                                                                                                                                           |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |     |     |                                                                                                                                           |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |     |     |                                                                                                                                           |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-403/22                                                                                                                                   |     |     | <b>Course title:</b><br>V3 Scientific output as a part - study in a journal (originally AAB, ABA, ABB), individual authorship $\geq 3$ AH |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |     |     |                                                                                                                                           |     |     |     |       |
| <b>Number of credits:</b> 30                                                                                                                                              |     |     |                                                                                                                                           |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |     |     |                                                                                                                                           |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |     |     |                                                                                                                                           |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |     |     |                                                                                                                                           |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |     |     |                                                                                                                                           |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |     |     |                                                                                                                                           |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |     |     |                                                                                                                                           |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |     |     |                                                                                                                                           |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |     |     |                                                                                                                                           |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |     |     |                                                                                                                                           |     |     |     |       |
| <b>Past grade distribution</b><br>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   |
| <b>Lecturers:</b>                                                                                                                                                         |     |     |                                                                                                                                           |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |     |     |                                                                                                                                           |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |     |     |                                                                                                                                           |     |     |     |       |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                   |       |     |                                                                                                                |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                 |       |     |                                                                                                                |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                       |       |     |                                                                                                                |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-410/22                                                                                                                                           |       |     | <b>Course title:</b><br>V3 Scientific output in a journal outside the index databases<br>(originally ADE, ADF) |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:    per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                |     |     |     |       |
| <b>Number of credits:</b> 12                                                                                                                                                      |       |     |                                                                                                                |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                      |       |     |                                                                                                                |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                    |       |     |                                                                                                                |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                             |       |     |                                                                                                                |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                       |       |     |                                                                                                                |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                         |       |     |                                                                                                                |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                            |       |     |                                                                                                                |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                    |       |     |                                                                                                                |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                                |       |     |                                                                                                                |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                     |       |     |                                                                                                                |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 52                                                                                                          |       |     |                                                                                                                |     |     |     |       |
| A                                                                                                                                                                                 | ABS   | B   | C                                                                                                              | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                               | 100,0 | 0,0 | 0,0                                                                                                            | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                 |       |     |                                                                                                                |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                               |       |     |                                                                                                                |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                               |       |     |                                                                                                                |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                           |       |     |                                                                                                                                                                       |     |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-407/22                                                                                                                                   |       |     | <b>Course title:</b><br>V3 Scientific output in a journal registered by CCC, WOS, SCOPUS - JCR/Q1 – Q2 (originally ADC, ADD, ADM, ADN), first or corresponding author |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Number of credits:</b> 50                                                                                                                                              |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 130                                                                                                 |       |     |                                                                                                                                                                       |     |     |     |       |
| A                                                                                                                                                                         | ABS   | B   | C                                                                                                                                                                     | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0 | 0,0                                                                                                                                                                   | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |     |                                                                                                                                                                       |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |     |                                                                                                                                                                       |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                  |       |     |                                                                                                                                                                      |     |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                                  |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                      |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-408/22                                                                                                                                          |       |     | <b>Course title:</b><br>V3 Scientific output in a journal registered by CCC, WOS, SCOPUS - JCR/Q3- Q4 (originally ADC, ADD, ADM, ADN), first or corresponding author |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br><b>per week:   per level/semester:</b><br><b>Form of the course:</b> on-site learning |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Number of credits:</b> 40                                                                                                                                                     |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                                     |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                                   |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                            |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                                      |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                        |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                           |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                                   |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                               |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                                    |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 62                                                                                                         |       |     |                                                                                                                                                                      |     |     |     |       |
| A                                                                                                                                                                                | ABS   | B   | C                                                                                                                                                                    | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                              | 100,0 | 0,0 | 0,0                                                                                                                                                                  | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                                |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                              |       |     |                                                                                                                                                                      |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                              |       |     |                                                                                                                                                                      |     |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                           |       |                                                                                                                                                               |     |     |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-------|
| <b>Academic year:</b> 2023/2024                                                                                                                                           |       |                                                                                                                                                               |     |     |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                         |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                               |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Course ID:</b><br>PriF/N-DSSZ-409/22                                                                                                                                   |       | <b>Course title:</b><br>V3 Scientific output in the journal registered by CCC, WOS, SCOPUS - JCR/Q1 – Q2 – Q3 - Q4 (originally ADC, ADD, ADM, ADN), co-author |     |     |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b><br><b>Number of hours:</b><br>per week:   per level/semester:<br><b>Form of the course:</b> on-site learning |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Number of credits:</b> 20                                                                                                                                              |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Recommended semester:</b>                                                                                                                                              |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Educational level:</b> III.                                                                                                                                            |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Prerequisites:</b>                                                                                                                                                     |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Course requirements:</b>                                                                                                                                               |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Learning outcomes:</b>                                                                                                                                                 |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Class syllabus:</b>                                                                                                                                                    |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Recommended literature:</b>                                                                                                                                            |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Languages necessary to complete the course:</b>                                                                                                                        |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Notes:</b>                                                                                                                                                             |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 235                                                                                                 |       |                                                                                                                                                               |     |     |     |     |       |
| A                                                                                                                                                                         | ABS   | B                                                                                                                                                             | C   | D   | E   | FX  | NEABS |
| 0,0                                                                                                                                                                       | 100,0 | 0,0                                                                                                                                                           | 0,0 | 0,0 | 0,0 | 0,0 | 0,0   |
| <b>Lecturers:</b>                                                                                                                                                         |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Last change:</b>                                                                                                                                                       |       |                                                                                                                                                               |     |     |     |     |       |
| <b>Approved by:</b>                                                                                                                                                       |       |                                                                                                                                                               |     |     |     |     |       |