

## Course descriptions

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## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                        |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-236/22                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Algorithms and Data Structures |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week:</b> 4 <b>per level/semester:</b> 56<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                  |                                                        |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                        |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                        |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                        |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-241/15 - Programming (3)                                                                                                                                                                                                                                                                                                                                                                                                    |                                                        |
| <b>Course requirements:</b><br>Interim assessment: assessment of short tests (30%) and several smaller projects (20%)<br>Examination: test and practical exam at the computer<br>Indicative grading scale: A 88%, B 81%, C 74%, D 67%, E 60%<br>Scale of assessment (preliminary/final): 50/50                                                                                                                                                                     |                                                        |
| <b>Learning outcomes:</b><br>After completing the course, students will understand different abstract data types, understand the differences between their different implementations, will be able to estimate the complexity of operations on individual structures, will be able to use more complex data structures and advanced algorithms in programming more complex problems, analyze and compare programs solving the same problem in terms of efficiency. |                                                        |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>• complexity criteria, program run time calculation, asymptotic notation</li> <li>• basic abstract data types - list, stack, row</li> <li>• tree, binary tree, binary search tree</li> <li>• balanced tree</li> <li>• priority queue</li> <li>• chart, searching, backtracking</li> <li>• dictionary, hashing</li> <li>• sorting</li> </ul>                                                          |                                                        |
| <b>Recommended literature:</b><br>the teacher's own electronic study materials published on the subject's website, resp. in Moodle<br>Ryant, I .: Object-Oriented Algorithms and Data Structures, 2017, P. 288<br>Wróblewski, P .: Algorithms: Data Structures and Programming Techniques, Computer Press, 2004, p. 350<br>Mehlhorn, K., Sanders, P .: Algorithms and data structures: The basic toolbox. Berlin: Springer, 2008                                   |                                                        |

Cormen, T.H., Leiserson, C.E., Rivest, R.L., Syein, C.: Introduction to Algorithms, MIT Press; 3rd edition, 2009

**Languages necessary to complete the course:**

Slovak, English

**Notes:**

**Past grade distribution**

Total number of evaluated students: 40

| A    | B    | C    | D    | E    | FX  |
|------|------|------|------|------|-----|
| 20,0 | 15,0 | 17,5 | 20,0 | 20,0 | 7,5 |

**Lecturers:** doc. RNDr. Zuzana Kubincová, PhD.

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                       |       |                                                                      |     |     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |       |                                                                      |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |       |                                                                      |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |       |                                                                      |     |     |     |
| <b>Course ID:</b><br>PriF.KAlCh/N-bUCH-039/22                                                                                                                                                         |       | <b>Course title:</b><br>Analytical Chemistry Practicals for Teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                                      |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                           |       |                                                                      |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                       |       |                                                                      |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |       |                                                                      |     |     |     |
| <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: 15                                                                                                                              |       |                                                                      |     |     |     |
| A                                                                                                                                                                                                     | B     | C                                                                    | D   | E   | FX  |
| 73,33                                                                                                                                                                                                 | 26,67 | 0,0                                                                  | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Róbert Góra, PhD., RNDr. Simona Procházková, PhD., RNDr. Katarína Chovancová, PhD.                                                                                       |       |                                                                      |     |     |     |
| <b>Last change:</b> 30.09.2022                                                                                                                                                                        |       |                                                                      |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |       |                                                                      |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------|------|-------|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |      |                                                           |      |       |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |      |                                                           |      |       |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |      |                                                           |      |       |     |
| <b>Course ID:</b><br>PriF.KAlCh/N-bUCH-038/22                                                                                                                                                                         |      | <b>Course title:</b><br>Analytical Chemistry for Teachers |      |       |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<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> I.                                                                                                                                                                                          |      |                                                           |      |       |     |
| <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: 15                                                                                                                                              |      |                                                           |      |       |     |
| A                                                                                                                                                                                                                     | B    | C                                                         | D    | E     | FX  |
| 0,0                                                                                                                                                                                                                   | 20,0 | 46,67                                                     | 20,0 | 13,33 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Róbert Góra, PhD.                                                                                                                                       |      |                                                           |      |       |     |
| <b>Last change:</b> 30.09.2022                                                                                                                                                                                        |      |                                                           |      |       |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |      |                                                           |      |       |     |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                          |     |                                                                    |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                        |     |                                                                    |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                              |     |                                                                    |     |     |     |
| <b>Course ID:</b><br>PriF.KAlCh/N-bCAL-055/22                                                                                                                                                                            |     | <b>Course title:</b><br>Analytical Chemistry in School Experiments |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |     |                                                                    |     |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                              |     |                                                                    |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                          |     |                                                                    |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                             |     |                                                                    |     |     |     |
| <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                                                                                                                                                                                                                        | B   | C                                                                  | D   | E   | FX  |
| 0,0                                                                                                                                                                                                                      | 0,0 | 0,0                                                                | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Radoslav Halko, PhD., RNDr. Simona Procházková, PhD.                                                                                                                                        |     |                                                                    |     |     |     |
| <b>Last change:</b> 30.09.2022                                                                                                                                                                                           |     |                                                                    |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                      |     |                                                                    |     |     |     |



## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------|-----|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                     |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                     |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                     |     |     |      |
| <b>Course ID:</b><br>PriF.KAn/N-bUXX-002/22                                                                                                                                                        |     | <b>Course title:</b><br>Auxology and School Hygiene |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                     |     |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                     |     |     |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                    |     |                                                     |     |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                     |     |     |      |
| <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: 67                                                                                                                           |     |                                                     |     |     |      |
| A                                                                                                                                                                                                  | B   | C                                                   | D   | E   | FX   |
| 98,51                                                                                                                                                                                              | 0,0 | 0,0                                                 | 0,0 | 0,0 | 1,49 |
| <b>Lecturers:</b> Mgr. Silvia Bodoriková, PhD., RNDr. Eva Neščáková, CSc.                                                                                                                          |     |                                                     |     |     |      |
| <b>Last change:</b> 24.07.2022                                                                                                                                                                     |     |                                                     |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                     |     |     |      |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |
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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |
| <b>Course ID:</b><br>FMFLKDMFI+KAG/1-<br>UXX-931/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>BSc Thesis Seminar (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                |
| <b>Course requirements:</b><br>Submission of partial output in the form of a proposal for the main objectives and structure of the bachelor's thesis, a search with an overview of available information sources on a selected topic of the bachelor's thesis.<br>Rating by scale:<br>A: 92-100%, excellent - excellent results,<br>B: 84-91%, very good - above average standard,<br>C: 76-83%, good - normal reliable work,<br>D: 68-75%, satisfactory - acceptable results,<br>E: 60-67%, sufficient - the results meet the minimum criteria,<br>Fx: 0-59%, insufficient - additional work required |                                                |
| <b>Learning outcomes:</b><br>The student is able to define the topic of their bachelor's thesis, can correctly determine the procedures and methods of its processing, divide the process of creation into time stages, gain the ability to work selectively and correctly with the literature on the selected topic.                                                                                                                                                                                                                                                                                  |                                                |
| <b>Class syllabus:</b><br>Definition of the topic and goal of the final work.<br>Study of professional literature.<br>Excerpt of the material.<br>Theoretical and methodological conception of the work.<br>Problem processing methodology.<br>Methodology of elaboration of the final work.<br>Formal-compositional requirements of final theses.                                                                                                                                                                                                                                                     |                                                |
| <b>Recommended literature:</b><br>Selection of professional literature according to the chosen topic of the thesis;<br>Current directive of the Rector of Charles University on the basic requirements for final theses;<br>KATUŠČÁK, D.: Ako písať záverečné a kvalifikačné práce. Nitra: Enigma 2007                                                                                                                                                                                                                                                                                                 |                                                |

|                                                                                                                                                             |     |     |      |      |     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|------|-----|-----|
| <b>Languages necessary to complete the course:</b><br>slovak                                                                                                |     |     |      |      |     |     |
| <b>Notes:</b>                                                                                                                                               |     |     |      |      |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 20                                                                                    |     |     |      |      |     |     |
| A                                                                                                                                                           | ABS | B   | C    | D    | E   | FX  |
| 65,0                                                                                                                                                        | 0,0 | 5,0 | 15,0 | 15,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD., RNDr. Monika Dillingerová, PhD., RNDr. Martina Bátorová, PhD., doc. PaedDr. Klára Velmovská, PhD. |     |     |      |      |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                              |     |     |      |      |     |     |
| <b>Approved by:</b>                                                                                                                                         |     |     |      |      |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |
| <b>Course ID:</b><br>FMFLKDMFI+KAG/1-<br>UXX-932/22                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Course title:</b><br>BSc Thesis Seminar (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                   |                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |
| <b>Course requirements:</b><br>Submission of partial output in the form of a comprehensive chapter of the bachelor's thesis.<br>Rating by scale:<br>A: 92-100%, excellent - excellent results,<br>B: 84-91%, very good - above average standard,<br>C: 76-83%, good - normal reliable work,<br>D: 68-75%, satisfactory - acceptable results,<br>E: 60-67%, sufficient - the results meet the minimum criteria,<br>Fx: 0-59%, insufficient - additional work required |                                                |
| <b>Learning outcomes:</b><br>The student is able to define the topic of their bachelor's thesis, can correctly determine the procedures and methods of its processing, gain the ability to work selectively and correctly with the literature on the selected topic and appropriately present the results and important conclusions.                                                                                                                                 |                                                |
| <b>Class syllabus:</b><br>Definition of the topic and goal of the final work.<br>Study of professional literature.<br>Excerpt of the material.<br>Theoretical and methodological conception of the work.<br>Problem processing methodology.<br>Methodology of elaboration of the final work.<br>Formal-compositional requirements of final theses.                                                                                                                   |                                                |
| <b>Recommended literature:</b><br>Selection of professional literature according to the chosen topic of the thesis;<br>Current directive of the Rector of Charles University on the basic requirements for final theses;<br>KATUŠČÁK, D.: Ako písať záverečné a kvalifikačné práce. Nitra: Enigma 2007                                                                                                                                                               |                                                |
| <b>Languages necessary to complete the course:</b><br>slovak                                                                                                                                                                                                                                                                                                                                                                                                         |                                                |

|                                                                                                                                                   |     |      |       |     |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|-------|-----|-----|-----|
| <b>Notes:</b>                                                                                                                                     |     |      |       |     |     |     |
| <b>Past grade distribution</b>                                                                                                                    |     |      |       |     |     |     |
| Total number of evaluated students: 14                                                                                                            |     |      |       |     |     |     |
| A                                                                                                                                                 | ABS | B    | C     | D   | E   | FX  |
| 78,57                                                                                                                                             | 0,0 | 7,14 | 14,29 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD., RNDr. Monika Dillingerová, PhD., RNDr. Martina Bátorová, PhD., PaedDr. Tünde Kiss, PhD. |     |      |       |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                    |     |      |       |     |     |     |
| <b>Approved by:</b>                                                                                                                               |     |      |       |     |     |     |

## STATE EXAM DESCRIPTION

|                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|
| <b>Academic year:</b> 2022/2023                   |                                                   |
| <b>University:</b> Comenius University Bratislava |                                                   |
| <b>Faculty:</b> Faculty of Natural Sciences       |                                                   |
| <b>Course ID:</b><br>PriF.KDPP/N-bOBH-100/22      | <b>Course title:</b><br>Bachelor's Thesis Defence |
| <b>Number of credits:</b> 8                       |                                                   |
| <b>Educational level:</b> I.                      |                                                   |
| <b>State exam syllabus:</b>                       |                                                   |
| <b>Last change:</b> 01.08.2022                    |                                                   |
| <b>Approved by:</b>                               |                                                   |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-------------------------------------------------------|------|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |     |                                                       |      |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |     |                                                       |      |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |     |                                                       |      |     |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-040/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     | <b>Course title:</b><br>Bachelor's Thesis Seminar (1) |      |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |                                                       |      |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |     |                                                       |      |     |      |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |     |                                                       |      |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     |                                                       |      |     |      |
| <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: 51                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |     |                                                       |      |     |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ABS | B   | C                                                     | D    | E   | FX   |
| 70,59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0,0 | 9,8 | 5,88                                                  | 5,88 | 0,0 | 7,84 |
| <b>Lecturers:</b> prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. RNDr. Štefan Karolčík, PhD., doc. PaedDr. Elena Čipková, PhD., RNDr. Jana Ciceková, PhD., PaedDr. Anna Drozdíková, PhD., PhDr. ThLic. Peter Ikhardt, PhD., Mgr. Lenka Šikulíncová, PhD., Mgr. Milica Križanová, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., RNDr. Soňa Nagyová, PhD., Mgr. Štefan Zolcer, PhD., doc. Mgr. Marcel Horňák, PhD., doc. RNDr. Daniel Gurňák, PhD., RNDr. Katarína Danielová, PhD., RNDr. Ivan Ružek, PhD., doc. RNDr. Jozef Tatiersky, PhD., RNDr. Jana Chrappová, PhD., doc. Ing. Mária Mečiarová, PhD., doc. RNDr. Katarína Pavličková, CSc., doc. Mgr. Soňa Jančovičová, PhD., doc. RNDr. Zlatica Országhová, CSc., doc. RNDr. Marek Vaculík, PhD., Mgr. Peter Štefánik, PhD., doc. RNDr. Eva Záhorská, PhD., PhDr. Michael Fuchs |     |     |                                                       |      |     |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |     |                                                       |      |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |     |                                                       |      |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |       |                                                       |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |       |                                                       |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |       |                                                       |      |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-041/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |       | <b>Course title:</b><br>Bachelor's Thesis Seminar (2) |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |       |                                                       |      |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |       |                                                       |      |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |       |                                                       |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |       |                                                       |      |     |     |
| <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: 41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |       |                                                       |      |     |     |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ABS | B     | C                                                     | D    | E   | FX  |
| 75,61                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0,0 | 17,07 | 4,88                                                  | 2,44 | 0,0 | 0,0 |
| <b>Lecturers:</b> prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. RNDr. Štefan Karolčík, PhD., doc. PaedDr. Elena Čipková, PhD., RNDr. Jana Ciceková, PhD., PaedDr. Anna Drozdíková, PhD., PhDr. ThLic. Peter Ikhardt, PhD., Mgr. Lenka Šikulíncová, PhD., Mgr. Milica Križanová, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., RNDr. Soňa Nagyová, PhD., Mgr. Štefan Zolcer, PhD., doc. Mgr. Marcel Horňák, PhD., doc. RNDr. Daniel Gurňák, PhD., RNDr. Katarína Danielová, PhD., RNDr. Ivan Ružek, PhD., doc. RNDr. Jozef Tatiersky, PhD., RNDr. Jana Chrappová, PhD., doc. Ing. Mária Mečiarová, PhD., doc. RNDr. Katarína Pavličková, CSc., doc. Mgr. Soňa Jančovičová, PhD., doc. RNDr. Zlatica Országhová, CSc., doc. RNDr. Marek Vaculík, PhD., Mgr. Peter Štefánik, PhD., doc. RNDr. Eva Záhorská, PhD., Mgr. Rastislav Cákoci, PhD., PhDr. Michael Fuchs |     |       |                                                       |      |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |       |                                                       |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |       |                                                       |      |     |     |



## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------|------|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                        |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                        |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                        |      |      |      |
| <b>Course ID:</b><br>PriF.KAn/N-XXXX-005/21                                                                                                                                                        |       | <b>Course title:</b><br>Bioarchaeology |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                        |      |      |      |
| <b>Number of credits:</b> 3                                                                                                                                                                        |       |                                        |      |      |      |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                            |       |                                        |      |      |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                  |       |                                        |      |      |      |
| <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: 930                                                                                                                          |       |                                        |      |      |      |
| A                                                                                                                                                                                                  | B     | C                                      | D    | E    | FX   |
| 73,01                                                                                                                                                                                              | 12,37 | 6,67                                   | 3,33 | 0,97 | 3,66 |
| <b>Lecturers:</b> doc. RNDr. Radoslav Beňuš, PhD., Mgr. Silvia Bodoriková, PhD., prof. Mgr. Viktor Černý, Dr.                                                                                      |       |                                        |      |      |      |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                     |       |                                        |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                        |      |      |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------|-------|-------|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |                                                   |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |                                                   |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |                                                   |       |       |       |
| <b>Course ID:</b><br>PriF.KBCh/N-bUCH-003/22                                                                                                                                                                          |     | <b>Course title:</b><br>Biochemistry for Teachers |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 4 / 2 <b>per level/semester:</b> 56 / 28<br><b>Form of the course:</b> on-site learning |     |                                                   |       |       |       |
| <b>Number of credits:</b> 7                                                                                                                                                                                           |     |                                                   |       |       |       |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                       |     |                                                   |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |                                                   |       |       |       |
| <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: 18                                                                                                                                              |     |                                                   |       |       |       |
| A                                                                                                                                                                                                                     | B   | C                                                 | D     | E     | FX    |
| 27,78                                                                                                                                                                                                                 | 0,0 | 16,67                                             | 22,22 | 16,67 | 16,67 |
| <b>Lecturers:</b> Mgr. Júlia Zemanová, PhD., Mgr. Andrea Cillingová, PhD., prof. RNDr. Marta Kollárová, DrSc., doc. RNDr. Jana Korduláková, PhD.                                                                      |     |                                                   |       |       |       |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                                        |     |                                                   |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |                                                   |       |       |       |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------|------|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                                        |      |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                                        |      |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                                        |      |     |      |
| <b>Course ID:</b><br>PriF/N-bUXX-003/22                                                                                                                                                            |       | <b>Course title:</b><br>Calculus for Chemistry Teacher |      |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                        |      |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                        |       |                                                        |      |     |      |
| <b>Recommended semester:</b> 1.                                                                                                                                                                    |       |                                                        |      |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                       |       |                                                        |      |     |      |
| <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: 11                                                                                                                           |       |                                                        |      |     |      |
| A                                                                                                                                                                                                  | B     | C                                                      | D    | E   | FX   |
| 36,36                                                                                                                                                                                              | 18,18 | 27,27                                                  | 9,09 | 0,0 | 9,09 |
| <b>Lecturers:</b> doc. PaedDr. Klára Velmovská, PhD.                                                                                                                                               |       |                                                        |      |     |      |
| <b>Last change:</b> 17.10.2022                                                                                                                                                                     |       |                                                        |      |     |      |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                                        |      |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                                  |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                                  |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                                  |       |       |       |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCXX-002/22                                                                                                                                                      |       | <b>Course title:</b><br>Chemical Calculation (1) |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                  |       |       |       |
| <b>Number of credits:</b> 2                                                                                                                                                                        |       |                                                  |       |       |       |
| <b>Recommended semester:</b> 1.                                                                                                                                                                    |       |                                                  |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                       |       |                                                  |       |       |       |
| <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: 89                                                                                                                           |       |                                                  |       |       |       |
| A                                                                                                                                                                                                  | B     | C                                                | D     | E     | FX    |
| 14,61                                                                                                                                                                                              | 14,61 | 12,36                                            | 15,73 | 15,73 | 26,97 |
| <b>Lecturers:</b> doc. RNDr. Jozef Tatiersky, PhD., Mgr. Olivier Monfort, PhD.                                                                                                                     |       |                                                  |       |       |       |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                     |       |                                                  |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                                  |       |       |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                  |      |      |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                  |      |      |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                  |      |      |     |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCAG-005/22                                                                                                                                                      |     | <b>Course title:</b><br>Chemical Calculation (2) |      |      |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                  |      |      |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                  |      |      |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                    |     |                                                  |      |      |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                  |      |      |     |
| <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                                                                                                                                                                                                  | B   | C                                                | D    | E    | FX  |
| 66,67                                                                                                                                                                                              | 0,0 | 16,67                                            | 8,33 | 8,33 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Jozef Tatiersky, PhD., RNDr. Ján Šimunek, PhD.                                                                                                                        |     |                                                  |      |      |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                     |     |                                                  |      |      |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                  |      |      |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |     |                                                                   |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |     |                                                                   |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |     |                                                                   |     |     |     |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCAG-025/22                                                                                                                                                         |     | <b>Course title:</b><br>Chemistry Lab Practicals for Non-Chemists |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                                   |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                           |     |                                                                   |     |     |     |
| <b>Recommended semester:</b> 1., 2..                                                                                                                                                                  |     |                                                                   |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |     |                                                                   |     |     |     |
| <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                                                                                                                                                                                                     | B   | C                                                                 | D   | E   | FX  |
| 0,0                                                                                                                                                                                                   | 0,0 | 0,0                                                               | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Jana Chrappová, PhD., Mgr. Dominika Lacušková                                                                                                                                 |     |                                                                   |     |     |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                        |     |                                                                   |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |     |                                                                   |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |     |                                                         |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |     |                                                         |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |     |                                                         |     |     |     |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCAG-026/22                                                                                                                                                         |     | <b>Course title:</b><br>Chemistry Olympiad in Education |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                         |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                           |     |                                                         |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                       |     |                                                         |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |     |                                                         |     |     |     |
| <b>Prerequisites:</b> PriF.KAgCh/N-bUCH-034/22 - General Chemistry for Teachers and PriF.KAgCh/N-bUCH-035/22 - Laboratory Technique for Teachers                                                      |     |                                                         |     |     |     |
| <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: 2                                                                                                                               |     |                                                         |     |     |     |
| A                                                                                                                                                                                                     | B   | C                                                       | D   | E   | FX  |
| 100,0                                                                                                                                                                                                 | 0,0 | 0,0                                                     | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Jana Chrappová, PhD.                                                                                                                                                          |     |                                                         |     |     |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                        |     |                                                         |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |     |                                                         |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |      |                                                              |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |      |                                                              |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |      |                                                              |       |       |       |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCAG-024/22                                                                                                                                                                         |      | <b>Course title:</b><br>Chemistry for Non-Chemistry Teachers |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning |      |                                                              |       |       |       |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |      |                                                              |       |       |       |
| <b>Recommended semester:</b> 1., 2..                                                                                                                                                                                  |      |                                                              |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                                          |      |                                                              |       |       |       |
| <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: 15                                                                                                                                              |      |                                                              |       |       |       |
| A                                                                                                                                                                                                                     | B    | C                                                            | D     | E     | FX    |
| 0,0                                                                                                                                                                                                                   | 20,0 | 13,33                                                        | 26,67 | 13,33 | 26,67 |
| <b>Lecturers:</b> doc. RNDr. Jozef Tatiersky, PhD., RNDr. Jana Chrappová, PhD., Mgr. Dominika Lacuškova                                                                                                               |      |                                                              |       |       |       |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                                        |      |                                                              |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                                   |      |                                                              |       |       |       |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                                           |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                                           |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                                           |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-043/22                                                                                                                                                       |     | <b>Course title:</b><br>Cognitive Skills Development in Science Education |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                                           |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                                           |     |     |     |
| <b>Recommended semester:</b> 3., 5.                                                                                                                                                                |     |                                                                           |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                                           |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                                         | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                                       | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Milica Križanová, PhD.                                                                                                                                                      |     |                                                                           |     |     |     |
| <b>Last change:</b> 07.09.2022                                                                                                                                                                     |     |                                                                           |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                                           |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                                |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                                |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                                |     |     |     |
| <b>Course ID:</b><br>PriF.KEM/N-bEXX-038/22                                                                                                                                                        |     | <b>Course title:</b><br>Conservation Biology and Public Policy |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                                |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                                |     |     |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                    |     |                                                                |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                                |     |     |     |
| <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: 11                                                                                                                           |     |                                                                |     |     |     |
| A                                                                                                                                                                                                  | B   | C                                                              | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                            | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Marta Nevřelová, PhD., Mgr. Blanka Lehotská, PhD.                                                                                                                           |     |                                                                |     |     |     |
| <b>Last change:</b> 19.09.2022                                                                                                                                                                     |     |                                                                |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                                |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                          |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                          |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                          |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-683/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Creating of Educational Software |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                          |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                          |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                          |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                          |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                          |
| <b>Course requirements:</b><br>Continuous assessment: The student earns points for meeting the criteria for five control stages (20% points for each stage) in the design, development and testing of their own emerging educational software.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                              |                                                          |
| <b>Learning outcomes:</b><br>According to the requirements of the teacher from practice, the student will design and develop educational software.<br>The program designs and tests in control stages.<br>The result of the last stage is a functional program.<br>The software is developed using Design-based Research methods.<br>The student will write a user manual for the teacher and methodological material for using their software in teaching.                                                                                                                                                                                                                                                     |                                                          |
| <b>Class syllabus:</b><br>Future teacher as a creator of educational software.<br>Selection of a suitable topic for educational software for teaching informatics at primary and secondary schools.<br>Specification of educational software in terms of design and functionality.<br>Interactivity, multimedia, openness of the software (settings, tasks, pictures, editor for the teacher, student registration, tables and diagrams of student evaluation ...).<br>Desktop programs vs. web applications.<br>Software development.<br>Multiple deployment of software in teaching.<br>Evaluation of software by users - teachers and students.<br>Software development using Design-based Research methods. |                                                          |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                          |

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| Transformations of the school in the digital age / Ivan Kalaš and team. Bratislava: Slovenské pedagogické nakladateľstvo - Mladé letá, 2013<br>T. Plomp, N. Nieveen et al. Educational Design Research. Slo 2013<br>own electronic texts published on the website, resp. in the Moodle environment |     |     |     |     |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                       |     |     |     |     |     |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                      |     |     |     |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 0                                                                                                                                                                                                                            |     |     |     |     |     |
| A                                                                                                                                                                                                                                                                                                  | B   | C   | D   | E   | FX  |
| 0,0                                                                                                                                                                                                                                                                                                | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD.                                                                                                                                                                                                                                           |     |     |     |     |     |
| <b>Last change:</b> 20.06.2022                                                                                                                                                                                                                                                                     |     |     |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                |     |     |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                 |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-574/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Course title:</b><br>Didactic Proseminar in Computer Science |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                 |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                 |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                 |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                 |
| <b>Course requirements:</b><br>Continuous assessment: seminar work, paper<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                 |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- can assess and evaluate different educational programs according to whether they are suitable for a given level of education</li> <li>- understands and is able to design activities for different types of computer science lessons</li> <li>- knows and is able to design instructional and constructivist lessons in practice</li> <li>- knows, can compare and evaluate computer science curricula in different countries</li> <li>- prepares and implements computer science lessons in seminars with colleagues, in which he applies non-traditional ways of teaching computer science topics</li> </ul> |                                                                 |
| <b>Class syllabus:</b><br>At each of the seminars we will address some problem of didactics of informatics from practice, such as: <ul style="list-style-type: none"> <li>- IT topics in the State Education Program,</li> <li>- different approaches to teaching computer science,</li> <li>- constructivism and constructionism,</li> <li>- IT instructivism,</li> <li>- informatics vs. digital literacy,</li> <li>- informatics in primary and pre-primary education,</li> <li>- informatics in other countries,</li> <li>- non-traditional ways of teaching computer science,</li> <li>- evaluation and feedback,</li> <li>- methods of working in computer science lessons</li> </ul>       |                                                                 |
| <b>Recommended literature:</b><br>methodical materials of teachers from practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                 |

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| own electronic texts published on the website, resp. in the Moodle environment |     |     |     |     |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                   |     |     |     |     |     |
| <b>Notes:</b>                                                                  |     |     |     |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 0        |     |     |     |     |     |
| A                                                                              | B   | C   | D   | E   | FX  |
| 0,0                                                                            | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD.                       |     |     |     |     |     |
| <b>Last change:</b> 20.06.2022                                                 |     |     |     |     |     |
| <b>Approved by:</b>                                                            |     |     |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                                |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                                |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                                |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bUCH-039/22                                                                                                                                                                          |       | <b>Course title:</b><br>Didactics of Chemistry |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |       |                                                |     |     |     |
| <b>Number of credits:</b> 4                                                                                                                                                                                           |       |                                                |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                       |       |                                                |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                                |     |     |     |
| <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: 16                                                                                                                                              |       |                                                |     |     |     |
| A                                                                                                                                                                                                                     | B     | C                                              | D   | E   | FX  |
| 43,75                                                                                                                                                                                                                 | 43,75 | 12,5                                           | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Milica Križanová, PhD.                                                                                                                                                                         |       |                                                |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                        |       |                                                |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                                |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |       |                                                                      |       |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |       |                                                                      |       |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |       |                                                                      |       |     |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUCH-038/22                                                                                                                                                          |       | <b>Course title:</b><br>Didactics of School Experiments in Chemistry |       |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                                      |       |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                           |       |                                                                      |       |     |      |
| <b>Recommended semester:</b> 5.                                                                                                                                                                       |       |                                                                      |       |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                          |       |                                                                      |       |     |      |
| <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: 22                                                                                                                              |       |                                                                      |       |     |      |
| A                                                                                                                                                                                                     | B     | C                                                                    | D     | E   | FX   |
| 4,55                                                                                                                                                                                                  | 27,27 | 31,82                                                                | 27,27 | 0,0 | 9,09 |
| <b>Lecturers:</b> PaedDr. Anna Drozdíková, PhD.                                                                                                                                                       |       |                                                                      |       |     |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                        |       |                                                                      |       |     |      |
| <b>Approved by:</b>                                                                                                                                                                                   |       |                                                                      |       |     |      |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                          |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-137/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Course title:</b><br>Digital Literacy |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                          |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                          |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                          |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                          |
| <b>Course requirements:</b><br>Continuous assessment: students will work on one major project throughout the semester and will be assessed continuously on the completion of the associated subtasks<br>Indicative grading scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                        |                                          |
| <b>Learning outcomes:</b><br>Students are able to take a research-oriented approach to topics related to the digital age. They can effectively search for information on a given topic, assess its relevance, reflect and discuss it. They are able to specify an unexplored area within a chosen topic and find a way to find out something new about it. They use appropriate digital tools in their research that enable them to collect, process and present the necessary data. They are able to create online documents and work collaboratively within them.                                                          |                                          |
| <b>Class syllabus:</b><br><ul style="list-style-type: none"> <li>- exploring current topics related to digital technologies and discussing them</li> <li>- working collaboratively to design, conduct and present your own research or investigation on a chosen topic</li> <li>- using online forms to collect different types of data</li> <li>- processing and interpreting data using digital tools</li> <li>- writing an article that incorporates theoretical background and your own findings</li> <li>- creating a presentation using online tools</li> <li>- presenting the results of your own research</li> </ul> |                                          |
| <b>Recommended literature:</b><br>Transformations of the school in the digital age / Ivan Kalaš and team. Bratislava: Slovenské pedagogické nakladateľstvo - Mladé letá, 2013<br>Pedagogicko-psychologické otázky online vzdelávania / Michal Černý. Brno: Masaryk University, 2018<br>Own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                                                                                        |                                          |
| <b>Languages necessary to complete the course:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                          |

|                                              |       |      |      |      |      |
|----------------------------------------------|-------|------|------|------|------|
| Slovak, English                              |       |      |      |      |      |
| <b>Notes:</b>                                |       |      |      |      |      |
| <b>Past grade distribution</b>               |       |      |      |      |      |
| Total number of evaluated students: 192      |       |      |      |      |      |
| A                                            | B     | C    | D    | E    | FX   |
| 73,44                                        | 11,98 | 6,25 | 2,08 | 1,56 | 4,69 |
| <b>Lecturers:</b> Mgr. Mária Čujdíková, PhD. |       |      |      |      |      |
| <b>Last change:</b> 22.06.2022               |       |      |      |      |      |
| <b>Approved by:</b>                          |       |      |      |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                    |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-342/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Digital Technologies for Students with SEN |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                    |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                    |
| <b>Course requirements:</b><br>Continuous assessment: active participation in lessons (elaboration of assigned tasks, participation in discussions)<br>Exam: no<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 65%, E 60%                                                                                                                                                                                                                                                                                                                                           |                                                                    |
| <b>Learning outcomes:</b><br>Gain an overview of the possibilities of using digital technologies (DT) in the education of students with special educational needs (SEN). To get acquainted with the methods of teaching students with SEN and the creation of accessible study materials.                                                                                                                                                                                                                                                                                   |                                                                    |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- specification of student with SEN,</li> <li>- categorization of pupils with SEN,</li> <li>- assistive technologies for pupils with SEN and their way of working with DT,</li> <li>- accessibility of information on the web,</li> <li>- principles of universal design,</li> <li>- use of DT for the preparation of study materials for pupils with SEN,</li> <li>- recommended didactic methods in teaching pupils with SEN,</li> <li>- the use of DT to increase the inclusiveness of schools.</li> </ul> |                                                                    |
| <b>Recommended literature:</b><br>Use of ICT in children with special needs / Pavel Zikl ... [et al.]. Prague: Grada, 2011<br>Basics of inclusive pedagogy: child with disability, disruption and threat at school / Viktor Lechta (ed.); translated by Magda Wdowczyn. Prague: Portal, 2010                                                                                                                                                                                                                                                                                |                                                                    |
| <b>Languages necessary to complete the course:</b><br>Slovak, English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                    |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                    |

|                                                    |       |      |      |     |      |
|----------------------------------------------------|-------|------|------|-----|------|
| <b>Past grade distribution</b>                     |       |      |      |     |      |
| Total number of evaluated students: 73             |       |      |      |     |      |
| A                                                  | B     | C    | D    | E   | FX   |
| 73,97                                              | 10,96 | 5,48 | 2,74 | 0,0 | 6,85 |
| <b>Lecturers:</b> doc. RNDr. Ľudmila Jašková, PhD. |       |      |      |     |      |
| <b>Last change:</b> 20.06.2022                     |       |      |      |     |      |
| <b>Approved by:</b>                                |       |      |      |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                                           |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                                           |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                                           |      |      |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-022/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>Digital Technologies in Education |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning |     |       |                                                           |      |      |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |     |       |                                                           |      |      |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                       |     |       |                                                           |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                                           |      |      |      |
| <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: 65                                                                                                                                              |     |       |                                                           |      |      |      |
| A                                                                                                                                                                                                                     | ABS | B     | C                                                         | D    | E    | FX   |
| 53,85                                                                                                                                                                                                                 | 0,0 | 18,46 | 12,31                                                     | 4,62 | 3,08 | 7,69 |
| <b>Lecturers:</b> doc. RNDr. Štefan Karolčík, PhD., RNDr. Henrieta Mázorová, PhD., Mgr. Milica Križanová, PhD., Mgr. Lenka Šikulíncová, PhD.                                                                          |     |       |                                                           |      |      |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                        |     |       |                                                           |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                                           |      |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                           |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                           |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                           |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-238/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Course title:</b><br>Digital Technologies in Education |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                           |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                           |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                           |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                           |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                           |
| <b>Course requirements:</b><br>The final grade includes an evaluation for the developed designs of teaching models with the support of technology, a total of a maximum of 60 points and an oral exam, a total of a maximum of 40 points. To advance to the oral exam, the student must obtain at least 30 points for teaching models. To pass the oral exam, the student must obtain at least 20 points. The final grade includes an evaluation for the developed teaching models and an oral exam. In order to obtain an A rating, it is necessary to obtain at least 91 points, to obtain an B rating at least 81 points, to obtain a C rating at least 71 points, to obtain a D rating at least 61 points and to obtain an E rating at least 50 points. Scale of assessment (preliminary/final): 60/40                           |                                                           |
| <b>Learning outcomes:</b><br>By completing the course, the student will be able to critically assess the safety, suitability and meaningfulness of the application of digital technologies in the teaching process. Understand the risks, opportunities and limits of integrating digital technologies into teaching and their importance in supporting the learning process. He will be able to assess the quality of digital resources with educational content in the context of teaching needs. Can distinguish between false, misleading or truth-altering information and use procedures to verify the veracity, timeliness and scientific accuracy of published facts and facts. Can design an appropriate and effective application of selected digital technologies in the teaching program.                                |                                                           |
| <b>Class syllabus:</b><br>Digital resources and digital technologies vs. educational digital resources and educational technologies; Security in the digital world; BYOD in the teaching process - benefits, challenges, limits and limitations; Digital literacy and its importance in the digital world; Possibilities and limits of the use of digital technologies in support of personalized learning, research and research-oriented teaching; Evaluation of the quality of educational technologies and the possibility of their integration into teaching; Selected digital technologies supporting the teaching process.<br>1. Digital technologies - historical development, use, present, perspectives.<br>2. Digital literacy - what we mean by digital literacy, methods and means of development DG, education and DG. |                                                           |

3. Digital technologies in education - technologies vs. educational technologies, groups of technologies usable in education (Comprehensive educational environment, educational programs, mobile applications, virtual laboratories, applets, modules, accessories ...).
4. Digital technologies in education - educational content, assessment of suitability and adequacy of technology to support teaching, information retrieval, support of special educational needs.
5. Digital technologies in education - tools for communication, cooperation, creation and sharing of results.
6. Digital technologies in education - systems to support education and organization of the educational process.
7. Digital technologies in education - teaching methods and strategies supporting meaningful and appropriate applications of DT in education.
8. Digital technologies in education - social and ethical aspects of the use of DT in education.
9. Digital content creation - available software tools for creating educational content, teaching materials, quizzes, interactive exercises.
10. Security in the digital age - fake news, hoaxes, detectors and algorithms for their detection.
11. Digital content - procedures for verifying the truthfulness, accuracy and timeliness of information available on the Internet.
12. Research in the use of digital technologies in education.

#### **Recommended literature:**

1. Brestenská, B. et al. (2020). Innovative learning with the support of digital technologies. Bratislava: Comenius University in Bratislava, 2020. ISBN: 978-80-223-4927-7
2. Karolčík, Š., Čípková, E., Digital educational resources in the context of evaluating their quality. 1st ed. Bratislava: Comenius University in Bratislava, 155 p
3. ISTE standards for students - <https://www.iste.org/standards/iste-standards-for-students>
4. ISTE standards for teachers - <https://www.iste.org/standards/iste-standards-for-teachers>
5. Gormally, Carickman, Peggy; Hallar, Brittan; and Armstrong, Norris (2009) "Effects of Inquiry-based Learning on Students' Science Literacy Skills and Confidence," International Journal for the Scholarship of Teaching and Learning: 3 (2), Article 16. Available at: <http://digitalcommons.georgiasouthern.edu/ij-sotl/vol3/iss2/16>
6. Tsung-Hau Jen, Yi-Fen Yeh, Ying-Shao Hsu, Hsin-Kai Wu, Kuan-Ming Chen. (2016). Science teachers' TPACK-Practical: Standard-setting using an evidence-based approach. Computers & Education, Volume 95, Pp. 45-62, DOI: <https://doi.org/10.1016/j.compedu.2015.12.009>
7. REDECKER, Christine and Yves PUNIE. European Framework for the Digital Competence of Educators: DigCompEdu [online]. © European Union 2017 [cit. 2021-12-09]. Available at: <https://op.europa.eu/en/publication-detail/-/publication/fcc33b68-d581-11e7-a5b9-01aa75ed71a1/language-en>
8. Digital technologies are changing the cognitive process [online]. State Pedagogical Institute [cit. 2021-12-09]. Available at: [https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/digitalne\\_technologie\\_menia\\_poznavaci\\_proces.pdf](https://www.statpedu.sk/files/sk/o-organizacii/projekty/projekt-dvui/publikacie/digitalne_technologie_menia_poznavaci_proces.pdf)

#### **Languages necessary to complete the course:**

Slovak

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 138

| A     | B     | C   | D   | E    | FX   |
|-------|-------|-----|-----|------|------|
| 73,19 | 13,04 | 5,8 | 2,9 | 1,45 | 3,62 |

|                                                                               |
|-------------------------------------------------------------------------------|
| <b>Lecturers:</b> PaedDr. Andrea Hrušecká, PhD., PaedDr. Roman Hrušecký, PhD. |
| <b>Last change:</b> 22.06.2022                                                |
| <b>Approved by:</b>                                                           |



## COURSE DESCRIPTION

|                                                                                                                                                                                                    |     |                                                             |     |     |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                             |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                             |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                             |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-023/22                                                                                                                                                       |     | <b>Course title:</b><br>Digital Technologies in Education 2 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                             |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                             |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                    |     |                                                             |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                             |     |     |     |
| <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: 38                                                                                                                           |     |                                                             |     |     |     |
| A                                                                                                                                                                                                  | B   | C                                                           | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                         | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Henrieta Mázorová, PhD., Mgr. Lenka Šikulíncová, PhD.                                                                                                                      |     |                                                             |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                     |     |                                                             |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                             |     |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                    |     |                                                             |     |     |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                             |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                             |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                             |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-024/22                                                                                                                                                       |     | <b>Course title:</b><br>Digital Technologies in Education 3 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                             |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                             |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                    |     |                                                             |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                             |     |     |     |
| <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                                                                                                                            |     |                                                             |     |     |     |
| A                                                                                                                                                                                                  | B   | C                                                           | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                         | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Henrieta Mázorová, PhD., Mgr. Milica Križanová, PhD.                                                                                                                       |     |                                                             |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                     |     |                                                             |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                             |     |     |     |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------|------|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                               |       |                                                             |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                             |       |                                                             |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                   |       |                                                             |      |      |      |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-132/22                                                                                                                                                                                                                    |       | <b>Course title:</b><br>ESP 1/English for Specific Purposes |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                            |       |                                                             |      |      |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                   |       |                                                             |      |      |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                               |       |                                                             |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                  |       |                                                             |      |      |      |
| <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: 204                                                                                                                                                                                     |       |                                                             |      |      |      |
| A                                                                                                                                                                                                                                                             | B     | C                                                           | D    | E    | FX   |
| 67,65                                                                                                                                                                                                                                                         | 15,69 | 8,82                                                        | 0,98 | 2,45 | 4,41 |
| <b>Lecturers:</b> PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová,<br>Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., PhDr. Oľga Pažitková, CSc.,<br>RNDr. Tatiana Slováková, PhD., Mgr. Simona Tomášková, PhD. |       |                                                             |      |      |      |
| <b>Last change:</b> 26.09.2022                                                                                                                                                                                                                                |       |                                                             |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                           |       |                                                             |      |      |      |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------|------|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                               |       |                                                             |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                             |       |                                                             |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                   |       |                                                             |      |     |     |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-133/22                                                                                                                                                                                                                    |       | <b>Course title:</b><br>ESP 2/English for Specific Purposes |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                            |       |                                                             |      |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                   |       |                                                             |      |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                               |       |                                                             |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                  |       |                                                             |      |     |     |
| <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: 151                                                                                                                                                                                     |       |                                                             |      |     |     |
| A                                                                                                                                                                                                                                                             | B     | C                                                           | D    | E   | FX  |
| 84,11                                                                                                                                                                                                                                                         | 13,91 | 1,32                                                        | 0,66 | 0,0 | 0,0 |
| <b>Lecturers:</b> PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová,<br>Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., PhDr. Oľga Pažitková, CSc.,<br>RNDr. Tatiana Slováková, PhD., Mgr. Simona Tomášková, PhD. |       |                                                             |      |     |     |
| <b>Last change:</b> 26.09.2022                                                                                                                                                                                                                                |       |                                                             |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                           |       |                                                             |      |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------|-----|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                  |       |                                                             |     |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                |       |                                                             |     |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                      |       |                                                             |     |      |      |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-134/22                                                                                                                                                                                       |       | <b>Course title:</b><br>ESP 3/English for Specific Purposes |     |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                               |       |                                                             |     |      |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                      |       |                                                             |     |      |      |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                  |       |                                                             |     |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                     |       |                                                             |     |      |      |
| <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: 173                                                                                                                                                        |       |                                                             |     |      |      |
| A                                                                                                                                                                                                                                | B     | C                                                           | D   | E    | FX   |
| 76,88                                                                                                                                                                                                                            | 15,03 | 4,05                                                        | 0,0 | 1,16 | 2,89 |
| <b>Lecturers:</b> PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová,<br>Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., PhDr. Oľga Pažitková, CSc.,<br>RNDr. Tatiana Slováková, PhD. |       |                                                             |     |      |      |
| <b>Last change:</b> 26.09.2022                                                                                                                                                                                                   |       |                                                             |     |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                              |       |                                                             |     |      |      |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                  |      |                                                             |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                |      |                                                             |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                      |      |                                                             |     |     |     |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-135/22                                                                                                                                                                                       |      | <b>Course title:</b><br>ESP 4/English for Specific Purposes |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                               |      |                                                             |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                      |      |                                                             |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                  |      |                                                             |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                     |      |                                                             |     |     |     |
| <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: 129                                                                                                                                                        |      |                                                             |     |     |     |
| A                                                                                                                                                                                                                                | B    | C                                                           | D   | E   | FX  |
| 93,8                                                                                                                                                                                                                             | 5,43 | 0,78                                                        | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Lenka Jeleňová,<br>Mgr. Barbara Kordíková, PhD., PaedDr. Stanislav Kováč, PhD., PhDr. Oľga Pažitková, CSc.,<br>RNDr. Tatiana Slováková, PhD. |      |                                                             |     |     |     |
| <b>Last change:</b> 26.09.2022                                                                                                                                                                                                   |      |                                                             |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                              |      |                                                             |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------|------|-----|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                              |       |                                                               |      |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                            |       |                                                               |      |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                  |       |                                                               |      |     |       |
| <b>Course ID:</b><br>PriF.KOrCh/N-bCOR-001/22                                                                                                                                                                                                |       | <b>Course title:</b><br>Elective Seminar on Organic Chemistry |      |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                           |       |                                                               |      |     |       |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                  |       |                                                               |      |     |       |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                              |       |                                                               |      |     |       |
| <b>Educational level:</b> I.                                                                                                                                                                                                                 |       |                                                               |      |     |       |
| <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: 63                                                                                                                                                                     |       |                                                               |      |     |       |
| A                                                                                                                                                                                                                                            | B     | C                                                             | D    | E   | FX    |
| 42,86                                                                                                                                                                                                                                        | 17,46 | 4,76                                                          | 7,94 | 0,0 | 26,98 |
| <b>Lecturers:</b> doc. Ing. Mária Mečiarová, PhD., doc. RNDr. Peter Magdolen, PhD., RNDr. Viera Poláčková, PhD., Mgr. Henrieta Stankovičová, PhD., Mgr. Tibor Peňaška, PhD., Mgr. Dominika Krištofiková, PhD., Mgr. Viktória Némethová, PhD. |       |                                                               |      |     |       |
| <b>Last change:</b> 25.07.2022                                                                                                                                                                                                               |       |                                                               |      |     |       |
| <b>Approved by:</b>                                                                                                                                                                                                                          |       |                                                               |      |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                                    |      |                                                               |     |     |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |      |                                                               |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |      |                                                               |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |      |                                                               |     |     |       |
| <b>Course ID:</b><br>PriF.KOrCh/N-bCOR-008/22                                                                                                                                                      |      | <b>Course title:</b><br>Elective Seminar on Organic Synthesis |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |      |                                                               |     |     |       |
| <b>Number of credits:</b> 2                                                                                                                                                                        |      |                                                               |     |     |       |
| <b>Recommended semester:</b> 4.                                                                                                                                                                    |      |                                                               |     |     |       |
| <b>Educational level:</b> I.                                                                                                                                                                       |      |                                                               |     |     |       |
| <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: 29                                                                                                                           |      |                                                               |     |     |       |
| A                                                                                                                                                                                                  | B    | C                                                             | D   | E   | FX    |
| 48,28                                                                                                                                                                                              | 3,45 | 10,34                                                         | 6,9 | 6,9 | 24,14 |
| <b>Lecturers:</b> doc. Ing. Mária Mečiarová, PhD.                                                                                                                                                  |      |                                                               |     |     |       |
| <b>Last change:</b> 25.07.2022                                                                                                                                                                     |      |                                                               |     |     |       |
| <b>Approved by:</b>                                                                                                                                                                                |      |                                                               |     |     |       |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |                                                 |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |                                                 |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |                                                 |     |     |     |
| <b>Course ID:</b><br>PriF.KAlCh/N-bCXX-043/22                                                                                                                                                                         |     | <b>Course title:</b><br>Environmental Chemistry |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |     |                                                 |     |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |     |                                                 |     |     |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                       |     |                                                 |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |                                                 |     |     |     |
| <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                                                                                                                                                                                                                     | B   | C                                               | D   | E   | FX  |
| 0,0                                                                                                                                                                                                                   | 0,0 | 0,0                                             | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Radoslav Halko, PhD., RNDr. Renáta Górová, PhD., RNDr. Helena Jurdáková, PhD.                                                                                                            |     |                                                 |     |     |     |
| <b>Last change:</b> 26.09.2022                                                                                                                                                                                        |     |                                                 |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |                                                 |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|------|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                                                      |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                                                      |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                                                      |      |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-025/22                                                                                                                                                       |     | <b>Course title:</b><br>Environmental Ethics - Education for Sustainable Development |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                                                      |      |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                                                      |      |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                    |     |                                                                                      |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                                                      |      |     |     |
| <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: 2                                                                                                                            |     |                                                                                      |      |     |     |
| A                                                                                                                                                                                                  | B   | C                                                                                    | D    | E   | FX  |
| 50,0                                                                                                                                                                                               | 0,0 | 0,0                                                                                  | 50,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Štefan Zolcer, PhD., RNDr. Jana Ciceková, PhD., doc. RNDr. Štefan Karolčík, PhD.                                                                                            |     |                                                                                      |      |     |     |
| <b>Last change:</b> 22.09.2022                                                                                                                                                                     |     |                                                                                      |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                                                      |      |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-136/22                                                                                                                                                         |     | <b>Course title:</b><br>Fachdeutsch in Naturwissenschaften 1 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                              |     |     |     |
| <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                                                                                                                            |     |                                                              |     |     |     |
| A                                                                                                                                                                                                  | B   | C                                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Karin Rózsová Wolfová                                                                                                                                                       |     |                                                              |     |     |     |
| <b>Last change:</b> 23.07.2022                                                                                                                                                                     |     |                                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                              |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-137/22                                                                                                                                                         |     | <b>Course title:</b><br>Fachdeutsch in Naturwissenschaften 2 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                              |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Karin Rózsová Wolfová                                                                                                                                                       |     |                                                              |     |     |     |
| <b>Last change:</b> 23.07.2022                                                                                                                                                                     |     |                                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                              |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------|-------|-------|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |      |                                                        |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |      |                                                        |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |      |                                                        |       |       |       |
| <b>Course ID:</b><br>PriF.KAgCh/N-bUCH-034/22                                                                                                                                                                         |      | <b>Course title:</b><br>General Chemistry for Teachers |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |      |                                                        |       |       |       |
| <b>Number of credits:</b> 4                                                                                                                                                                                           |      |                                                        |       |       |       |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                       |      |                                                        |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                                          |      |                                                        |       |       |       |
| <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: 33                                                                                                                                              |      |                                                        |       |       |       |
| A                                                                                                                                                                                                                     | B    | C                                                      | D     | E     | FX    |
| 3,03                                                                                                                                                                                                                  | 6,06 | 6,06                                                   | 21,21 | 21,21 | 42,42 |
| <b>Lecturers:</b> doc. RNDr. Jozef Tatiersky, PhD.                                                                                                                                                                    |      |                                                        |       |       |       |
| <b>Last change:</b> 04.10.2022                                                                                                                                                                                        |      |                                                        |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                                   |      |                                                        |       |       |       |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-------------------------------------------|-----|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                           |     |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                           |     |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                           |     |      |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-037/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>General Didactics |     |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |     |       |                                           |     |      |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |     |       |                                           |     |      |      |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                       |     |       |                                           |     |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                           |     |      |      |
| <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: 46                                                                                                                                              |     |       |                                           |     |      |      |
| A                                                                                                                                                                                                                     | ABS | B     | C                                         | D   | E    | FX   |
| 30,43                                                                                                                                                                                                                 | 0,0 | 26,09 | 26,09                                     | 8,7 | 2,17 | 6,52 |
| <b>Lecturers:</b> doc. RNDr. PaedDr. Zuzana Haláková, PhD.                                                                                                                                                            |     |       |                                           |     |      |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                        |     |       |                                           |     |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                           |     |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                               |      |                                               |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                             |      |                                               |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                   |      |                                               |     |     |      |
| <b>Course ID:</b><br>PriF.KGe/N-XXXX-004/21                                                                                                                                                                   |      | <b>Course title:</b><br>Genetics for everyone |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning            |      |                                               |     |     |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                   |      |                                               |     |     |      |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                                       |      |                                               |     |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                             |      |                                               |     |     |      |
| <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: 729                                                                                                                                     |      |                                               |     |     |      |
| A                                                                                                                                                                                                             | B    | C                                             | D   | E   | FX   |
| 93,0                                                                                                                                                                                                          | 1,37 | 0,0                                           | 0,0 | 0,0 | 5,62 |
| <b>Lecturers:</b> RNDr. Regina Sepšiová, PhD., doc. Mgr. Miroslava Slaninová, Dr., Mgr. Filip Červenák, PhD., doc. RNDr. Andrea Ševčovičová, PhD., doc. RNDr. Eliška Gálová, PhD., Mgr. Stanislav Kyzek, PhD. |      |                                               |     |     |      |
| <b>Last change:</b> 15.05.2021                                                                                                                                                                                |      |                                               |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                           |      |                                               |     |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                 |      |                                                                     |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                               |      |                                                                     |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                     |      |                                                                     |      |      |      |
| <b>Course ID:</b><br>PriF.KRGRR/N-XXXX-001/21                                                                                                                                                                                                                                                                                                                                   |      | <b>Course title:</b><br>Geography of the World in the 21.st century |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning                                                                                                                                                           |      |                                                                     |      |      |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                     |      |                                                                     |      |      |      |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                                                                                                                                                                                                         |      |                                                                     |      |      |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                               |      |                                                                     |      |      |      |
| <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: 56                                                                                                                                                                                                                                                                                                        |      |                                                                     |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                               | B    | C                                                                   | D    | E    | FX   |
| 78,57                                                                                                                                                                                                                                                                                                                                                                           | 7,14 | 5,36                                                                | 1,79 | 1,79 | 5,36 |
| <b>Lecturers:</b> Mgr. Rastislav Cákoci, PhD., RNDr. Katarína Danielová, PhD., doc. RNDr. Daniel Gurňák, PhD., doc. RNDr. František Križan, PhD., doc. RNDr. Eva Rajčáková, CSc., Mgr. Michala Sládeková Madajová, PhD., RNDr. Angelika Švecová, PhD., Mgr. Martin Šveda, PhD., prof. RNDr. Ladislav Tolmáči, PhD., RNDr. Mgr. Anna Tolmáči, PhD., Mgr. Gabriel Zubriczký, PhD. |      |                                                                     |      |      |      |
| <b>Last change:</b> 15.05.2021                                                                                                                                                                                                                                                                                                                                                  |      |                                                                     |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                             |      |                                                                     |      |      |      |



## COURSE DESCRIPTION

|                                                                                                                                                                                                                       |       |                                              |       |       |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------|-------|-------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                              |       |       |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                              |       |       |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                              |       |       |      |
| <b>Course ID:</b><br>PriF.KGP/N-bGPA-119/22                                                                                                                                                                           |       | <b>Course title:</b><br>Geology for Teachers |       |       |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |       |                                              |       |       |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |       |                                              |       |       |      |
| <b>Recommended semester:</b> 1., 2..                                                                                                                                                                                  |       |                                              |       |       |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                              |       |       |      |
| <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: 19                                                                                                                                              |       |                                              |       |       |      |
| A                                                                                                                                                                                                                     | B     | C                                            | D     | E     | FX   |
| 15,79                                                                                                                                                                                                                 | 15,79 | 15,79                                        | 21,05 | 26,32 | 5,26 |
| <b>Lecturers:</b> doc. RNDr. Daniel Pivko, PhD.                                                                                                                                                                       |       |                                              |       |       |      |
| <b>Last change:</b> 06.09.2022                                                                                                                                                                                        |       |                                              |       |       |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                              |       |       |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------|-----|-------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                     |     |                                             |     |       |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                   |     |                                             |     |       |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                         |     |                                             |     |       |      |
| <b>Course ID:</b><br>PriF.KMPLG/N-XXXX-007/21                                                                                                                                                                                                       |     | <b>Course title:</b><br>Geology in Nutshell |     |       |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning                            |     |                                             |     |       |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                         |     |                                             |     |       |      |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                                                                             |     |                                             |     |       |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                   |     |                                             |     |       |      |
| <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: 28                                                                                                                                                                            |     |                                             |     |       |      |
| A                                                                                                                                                                                                                                                   | B   | C                                           | D   | E     | FX   |
| 82,14                                                                                                                                                                                                                                               | 0,0 | 0,0                                         | 0,0 | 14,29 | 3,57 |
| <b>Lecturers:</b> prof. RNDr. Roman Aubrecht, Dr., doc. Mgr. Natália Hlavatá Hudáčková, PhD., doc. RNDr. Jozef Hók, CSc., prof. RNDr. Michal Kováč, DrSc., RNDr. Alexander Lačný, PhD., doc. RNDr. Jana Fridrichová, PhD., RNDr. Ondrej Nemec, PhD. |     |                                             |     |       |      |
| <b>Last change:</b> 20.01.2022                                                                                                                                                                                                                      |     |                                             |     |       |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                 |     |                                             |     |       |      |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------|-----|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                     |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                     |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                     |     |     |      |
| <b>Course ID:</b><br>PriF.KPI/N-XXXX-009/21                                                                                                                                                        |     | <b>Course title:</b><br>Global Environmental Issues |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                     |     |     |      |
| <b>Number of credits:</b> 3                                                                                                                                                                        |     |                                                     |     |     |      |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                            |     |                                                     |     |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                  |     |                                                     |     |     |      |
| <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: 297                                                                                                                          |     |                                                     |     |     |      |
| A                                                                                                                                                                                                  | B   | C                                                   | D   | E   | FX   |
| 94,95                                                                                                                                                                                              | 0,0 | 0,67                                                | 0,0 | 0,0 | 4,38 |
| <b>Lecturers:</b> doc. RNDr. Katarína Pavličková, CSc., prof. RNDr. Pavel Dlapa, PhD., RNDr. Martina Zvaríková, PhD., doc. RNDr. Ľubomír Jurkovič, PhD.                                            |     |                                                     |     |     |      |
| <b>Last change:</b> 09.11.2022                                                                                                                                                                     |     |                                                     |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                     |     |     |      |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                          |     |                                            |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                        |     |                                            |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                              |     |                                            |     |     |     |
| <b>Course ID:</b><br>PriF.KEM/N-bXXX-001/19                                                                                                                                                                              |     | <b>Course title:</b><br>Green University 1 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |     |                                            |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                              |     |                                            |     |     |     |
| <b>Recommended semester:</b> 1., 2., 3., 4., 5., 6..                                                                                                                                                                     |     |                                            |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                             |     |                                            |     |     |     |
| <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: 71                                                                                                                                                 |     |                                            |     |     |     |
| A                                                                                                                                                                                                                        | B   | C                                          | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                    | 0,0 | 0,0                                        | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., RNDr. Hubert Žarnovičan, PhD., Mgr. Martin Šebesta, PhD.                                                                                     |     |                                            |     |     |     |
| <b>Last change:</b> 11.02.2020                                                                                                                                                                                           |     |                                            |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                      |     |                                            |     |     |     |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                          |     |                                            |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                        |     |                                            |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                              |     |                                            |     |     |     |
| <b>Course ID:</b><br>PriF.KEM/N-bXXX-002/19                                                                                                                                                                              |     | <b>Course title:</b><br>Green University 2 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |     |                                            |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                              |     |                                            |     |     |     |
| <b>Recommended semester:</b> 1., 2., 3., 4., 5., 6..                                                                                                                                                                     |     |                                            |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                             |     |                                            |     |     |     |
| <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: 21                                                                                                                                                 |     |                                            |     |     |     |
| A                                                                                                                                                                                                                        | B   | C                                          | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                    | 0,0 | 0,0                                        | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., Mgr. Martin Šebesta, PhD.,<br>RNDr. Hubert Žarnovičan, PhD.                                                                                  |     |                                            |     |     |     |
| <b>Last change:</b> 11.02.2020                                                                                                                                                                                           |     |                                            |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                      |     |                                            |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |                                                                                  |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |                                                                                  |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |                                                                                  |     |     |     |
| <b>Course ID:</b><br>PriF.KAlCh/N-bCXX-008/22                                                                                                                                                                         |     | <b>Course title:</b><br>Identification and Quantification of Chemical Substances |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |     |                                                                                  |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |     |                                                                                  |     |     |     |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                       |     |                                                                                  |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |                                                                                  |     |     |     |
| <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                                                                                                                                                                                                                     | B   | C                                                                                | D   | E   | FX  |
| 0,0                                                                                                                                                                                                                   | 0,0 | 0,0                                                                              | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Andrea Vojs Staňová, PhD., doc. RNDr. Róbert Góra, PhD., doc. RNDr. Róbert Bodor, PhD., prof. RNDr. Marian Masár, PhD., doc. RNDr. Radoslav Halko, PhD., RNDr. Csilla Mišľanová, PhD.    |     |                                                                                  |     |     |     |
| <b>Last change:</b> 30.09.2022                                                                                                                                                                                        |     |                                                                                  |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |                                                                                  |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |
| <b>Course ID:</b><br>FMFI.KAI/1-MXX-491/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Course title:</b><br>Inclusive Approaches to Education of Students with Special Educational Needs |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                      |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                      |
| <b>Course requirements:</b><br>Continuous assessment: active participation in class (elaboration of assigned tasks, participation in discussions)<br>An exam: -<br>Indicative assessment level: e.g. A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                      |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- They will get acquainted with the basic characteristics of types of health disadvantage (HR) and will know the consequences of HR on education.</li> <li>- Gain personal experience from meetings with people with disabilities and will be able to explain and apply the rules of communication with them.</li> <li>- Can characterize the forms of education of students with SEN and assess the possibilities of their pedagogical, technical and human support, which positively affect the success of education.</li> </ul>                                                                                          |                                                                                                      |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Characteristics of basic concepts.</li> <li>- Disability models.</li> <li>- Disability legislation.</li> <li>- Human, communication, information and architectural barriers.</li> <li>- Impact of disability on education.</li> <li>- Segregation - integration - inclusion.</li> <li>- Information access technologies for people with disabilities.</li> <li>- Possibilities and limits of creating equal conditions for the education of pupils with specific educational needs.</li> <li>- Inclusive school - education for all.</li> <li>- The importance of education for the social inclusion of people with disabilities.</li> </ul> |                                                                                                      |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                      |

- Lechta, V. (ed): Inkluzivní pedagogika. Praha: Portál, 2016, ISBN 978-80-262-1123-5
- Slowík, J.: Komunikace s lidmi a postižením. Praha: Portál, 2010, ISBN 978-80-7367-691-9
- Kol. autorov: Od integrácie k inklúzii. VÚDPaP: Bratislava, 2018, ISBN 978-80-89698-27-1

**Languages necessary to complete the course:**

Slovak

**Notes:**

**Past grade distribution**

Total number of evaluated students: 69

| A     | B     | C    | D   | E   | FX  |
|-------|-------|------|-----|-----|-----|
| 75,36 | 20,29 | 1,45 | 0,0 | 0,0 | 2,9 |

**Lecturers:** Mgr. Ľudmila Hlinová

**Last change:** 15.03.2022

**Approved by:**



## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-121/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Course title:</b><br>Infomatics (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 40% points for working in seminars, another 20% for independent creative work and the remaining 20% for writing a paper.<br>Exam: practical exam 20% points<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 80/20                                                                                                                                                                                                                                                                                                                                    |                                        |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- will gain first-hand experience with various topics of theoretical computer science, which he will encounter during his further study</li> <li>- can discuss the presented IT problems and their use</li> <li>- analyzes various approaches to solving the presented IT problems in terms of their usability and effectiveness (at an intuitive level)</li> <li>- is able to design their own solutions to these problems, or modifications of existing solutions, on the basis of various criteria</li> <li>- is able to evaluate the correctness of solutions and discuss their improvements</li> </ul> |                                        |
| <b>Class syllabus:</b> <ol style="list-style-type: none"> <li>1. number systems</li> <li>2. encoding (text, images, sound ...)</li> <li>3. code error detection, self-correcting codes</li> <li>4. Huffman coding, compression</li> <li>5. logic operations, logic, logic circuits</li> <li>6. logic programming</li> <li>7. trees, binary search trees, decision trees</li> <li>8. simple graphs and work with them</li> <li>9. encryption - classic ciphers</li> <li>10. symmetric and asymmetric encryption</li> </ol>                                                                                                                                                                    |                                        |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |

Sedem divov informatiky / Juraj Hromkovic; translation by Michal Winczer. Ruzomberok: Verbum, 2012  
Algorithmic Puzzles / Anany Levitin, Maria Levitin. Oxford University Press Inc, 2011  
Tasks and methodologies at: <http://csunplugged.org/>  
Task archive on the website: [www.prask.ksp.sk](http://www.prask.ksp.sk)  
own electronic texts published on the website, resp. in the Moodle environment

**Languages necessary to complete the course:**

Slovak

**Notes:**

**Past grade distribution**

Total number of evaluated students: 22

| A     | B     | C     | D   | E    | FX  |
|-------|-------|-------|-----|------|-----|
| 54,55 | 27,27 | 13,64 | 0,0 | 4,55 | 0,0 |

**Lecturers:** doc. PaedDr. Monika Tomcsányiová, PhD., PaedDr. Daniela Bezáková, PhD., Mgr. Lucia Budinská, PhD.

**Last change:** 20.06.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                         |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                         |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-322/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Informatics (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                         |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                         |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                         |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                         |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 50% of points for work in seminars, another 25% for independent creative work and the remaining 25% for the elaboration of a paper.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                               |                                         |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- will gain practical experience with various topics of theoretical computer science, which he encounters during his studies</li> <li>- is able to discuss the presented IT problems and uses knowledge from other subjects to solve them</li> <li>- analyzes various approaches to solving the presented IT problems in terms of their usability and effectiveness (at an intuitive level)</li> <li>- is able to design their own solutions to these problems, or modifications of existing solutions, on the basis of various criteria</li> <li>- is able to evaluate the correctness of solutions and discuss their improvements</li> </ul> |                                         |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- sorting</li> <li>- information theory</li> <li>- languages and grammars</li> <li>- algorithmic solvability of problems</li> <li>- finite automata</li> <li>- determinism and nondeterminism</li> <li>- more complex coding</li> <li>- encryption</li> <li>- problems from graph theory - paths, skeletons</li> <li>- problems from graph theory - coloring, coverage</li> </ul>                                                                                                                                                                                                                                                                                 |                                         |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                         |

Sedem divov informatiky / Juraj Hromkovic; translation by Michal Winczer. Ruzomberok: Verbum, 2012  
 Algorithmic Puzzles / Anany Levitin, Maria Levitin. Oxford University Press Inc, 2011  
 Discrete and Combinatorial Mathematics: An Applied Introduction, 5th Editirion / Ralph P. Grimaldi. Pearson, 2003  
 Introduction to Automata Theory, Languages, and Computation / J. Hopcroft, et. al. Pearson, 2006  
 Tasks and methodologies at: <http://csunplugged.org/>  
 Task archive on the website: [www.prask.ksp.sk](http://www.prask.ksp.sk)  
 own electronic texts published on the website, resp. in the Moodle environment

**Languages necessary to complete the course:**  
 Slovak

**Notes:**

**Past grade distribution**

Total number of evaluated students: 6

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

**Lecturers:** RNDr. Michal Winczer, PhD., doc. PaedDr. Monika Tomcsányiová, PhD.

**Last change:** 20.06.2022

**Approved by:**

## STATE EXAM DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                  |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                  |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |
| <b>Course ID:</b><br>FMFLKDMFI/1-UIN-951/15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Informatics for Teachers |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                  |
| <b>Learning outcomes:</b><br>State examination for the completion of a bachelor's degree in teacher education in combination with computer science.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |
| <b>Class syllabus:</b><br>Programming in a higher level programming language. PPE and its principles. Basic mathematical concepts and principles needed to solve problems in the practice of computer science teachers. Mathematical structures (graphs, formal languages and automata, fractals). Creation of an educational program for the subject of informatics at primary and secondary school. Data structures (list, stack, row, trees, lexicographic trees, graphs). Parallel processes. Solving tasks in school informatics at primary and secondary school in a programming language that is suitable for a given level of education.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                  |
| <b>State exam syllabus:</b><br>State examination for the completion of a bachelor's degree in teacher education in combination with informaticsInformatics <ol style="list-style-type: none"> <li>1. Data types in the Scratch environment.</li> <li>2. New (custom) blocks in the Scratch environment.</li> <li>3. Using text files in the Scratch environment.</li> <li>4. Multiple characters in a Scratch environment.</li> <li>5. Keyboard and mouse events in the Scratch environment.</li> <li>6. Advanced Scratch environment options, custom variables.</li> <li>7. Working with the field. Associative fields. (Python)</li> <li>8. Characteristics of object-oriented programming. Classes. Inheritance. (Python)</li> <li>9. Characteristics and use of files. Text files and ways to work with them. (Python)</li> <li>10. Working with graphic information. Working with the tkinter module. (Python)</li> <li>11. Turtle graphics. Recursion. Working with the turtle module. (Python)</li> <li>12. Dynamic data structures.</li> <li>13. Representation of sets.</li> <li>14. Finding information in tables</li> <li>15. Sorting algorithms.</li> </ol> Didactics of informatics <ol style="list-style-type: none"> <li>1. Teaching informatics at primary and secondary schools. Basic school documents. General and partial educational goals. Facts, concepts, generalizations.</li> <li>2. Taxonomy of educational goals. Significance of taxonomies, levels of cognitive taxonomy (Bloom).</li> <li>3. Preparation of a lesson for work with a spreadsheet editor at elementary school.</li> <li>4. Preparation of a lesson on security in high school.</li> </ol> |                                                  |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. Children's programming languages. Features of a programming language that is suitable for teaching programming to students at the 2nd level of elementary school. Comparison Karel, Scratch.<br>6. Digital technologies in teaching.<br>7. E-learning. Advantages and disadvantages of various forms of e-learning. Risks and pitfalls of e-learning.<br>8. Use of software in education.<br>9. Organizational forms.<br>10. Evaluation. Forms and functions of evaluation.<br>11. Didactic principles. |
| <b>Recommended literature:</b><br>Literature recommended by individual subjects during the whole bachelor study.                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Last change:</b> 31.05.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## COURSE DESCRIPTION

|                                                                                                                                                                                                       |     |                                                                    |     |     |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |     |                                                                    |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |     |                                                                    |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |     |                                                                    |     |     |     |
| <b>Course ID:</b><br>PriF.KAgCh/N-bCAG-027/22                                                                                                                                                         |     | <b>Course title:</b><br>Inorganic Chemistry Practical for Teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 3 <b>per level/semester:</b> 42<br><b>Form of the course:</b> on-site learning |     |                                                                    |     |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                           |     |                                                                    |     |     |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                       |     |                                                                    |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |     |                                                                    |     |     |     |
| <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: 7                                                                                                                               |     |                                                                    |     |     |     |
| A                                                                                                                                                                                                     | B   | C                                                                  | D   | E   | FX  |
| 85,71                                                                                                                                                                                                 | 0,0 | 14,29                                                              | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Dominika Lacušková, RNDr. Jana Chrappová, PhD.                                                                                                                                 |     |                                                                    |     |     |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                        |     |                                                                    |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |     |                                                                    |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------|-------|-------|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                                          |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                                          |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                                          |       |       |       |
| <b>Course ID:</b><br>PriF.KAgCh/N-bUCH-037/22                                                                                                                                                                         |       | <b>Course title:</b><br>Inorganic Chemistry for Teachers |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |       |                                                          |       |       |       |
| <b>Number of credits:</b> 4                                                                                                                                                                                           |       |                                                          |       |       |       |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                       |       |                                                          |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                                          |       |       |       |
| <b>Prerequisites:</b> PriF.KAgCh/N-bUCH-034/22 - General Chemistry for Teachers                                                                                                                                       |       |                                                          |       |       |       |
| <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: 18                                                                                                                                              |       |                                                          |       |       |       |
| A                                                                                                                                                                                                                     | B     | C                                                        | D     | E     | FX    |
| 0,0                                                                                                                                                                                                                   | 11,11 | 16,67                                                    | 27,78 | 27,78 | 16,67 |
| <b>Lecturers:</b> doc. RNDr. Jozef Tatiersky, PhD.                                                                                                                                                                    |       |                                                          |       |       |       |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                                        |       |                                                          |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                                          |       |       |       |



## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                               |                                                              |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                     |                                                              |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-524/22                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Introduction to Information Security |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                      |                                                              |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                              |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                              |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                               |                                                              |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-141/22 - Programming (2) or FMFI.KDMFI/1-UIN-141/15 - Programming (2)                                                                                                                                                                                                                                                                                                                                    |                                                              |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 80% points for active participation in seminars and problem solving.<br>Exam: A student can get 20% of points for completing a written test.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 80/20                                                                                                      |                                                              |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- acquire terminology in the field of IB</li> <li>- can identify and describe security vulnerabilities and risks</li> <li>- manages to imitate a fictitious attacker and demonstrate a simple attack</li> </ul>                                                                                                                                                |                                                              |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Basic terminology on IB</li> <li>- Information security vs. privacy protection</li> <li>- Methods of social engineering</li> <li>- Basics of computer networks</li> <li>- Network attacks</li> <li>- Symmetric and asymmetric cryptography</li> <li>- Certificates</li> <li>- Passwords and hashing</li> <li>- Code vulnerabilities</li> <li>- Protective mechanisms</li> </ul> |                                                              |
| <b>Recommended literature:</b><br>Zeman, M., Oster, J., Blšák, M., Chromek D. : Textbook of information security for secondary vocational schools and grammar schools<br>Tomková, J., Kubovič, O., Kučera, P., Daubner, J. : Handbook on digital security for primary and secondary school teachers                                                                                                                                             |                                                              |

|                                                                                |       |     |     |     |     |
|--------------------------------------------------------------------------------|-------|-----|-----|-----|-----|
| own electronic texts published on the website, resp. in the Moodle environment |       |     |     |     |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                   |       |     |     |     |     |
| <b>Notes:</b>                                                                  |       |     |     |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 7        |       |     |     |     |     |
| A                                                                              | B     | C   | D   | E   | FX  |
| 71,43                                                                          | 28,57 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> prof. RNDr. Ivan Kalaš, PhD., Mgr. Tomáš Kubla               |       |     |     |     |     |
| <b>Last change:</b> 20.06.2022                                                 |       |     |     |     |     |
| <b>Approved by:</b>                                                            |       |     |     |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                    |     |                                                        |     |     |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                        |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                        |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                        |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-004/22                                                                                                                                                       |     | <b>Course title:</b><br>Introduction to Philosophy (1) |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                        |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                        |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                    |     |                                                        |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                        |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                      | D   | E   | FX  |
| 0,0                                                                                                                                                                                                | 0,0 | 0,0                                                    | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Štefan Zolcer, PhD.                                                                                                                                                         |     |                                                        |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                     |     |                                                        |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                        |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                        |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                        |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                        |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-005/22                                                                                                                                                       |     | <b>Course title:</b><br>Introduction to Philosophy (2) |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                        |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                        |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                    |     |                                                        |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                        |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                      | D   | E   | FX  |
| 0,0                                                                                                                                                                                                | 0,0 | 0,0                                                    | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Štefan Zolcer, PhD.                                                                                                                                                         |     |                                                        |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                     |     |                                                        |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                        |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                           |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                           |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                           |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-423/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Course title:</b><br>Introduction to Solving Computer Science Problems |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week:</b> 4 <b>per level/semester:</b> 56<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                |                                                                           |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                           |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                           |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                           |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-322/22 - Informatics (2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                           |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 30% of points for work in seminars, 20% of points for independent creative work. He can get 50% of points for solving homework.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                    |                                                                           |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- gain practical experience with programming solutions to more complex IT tasks</li> <li>- is able to discuss different approaches to solving the presented IT problems</li> <li>- analyzes various approaches to solving the presented IT problems, considers marginal cases</li> <li>- is able to identify what methods to use to solve specific tasks and design and program their own solution</li> <li>- can evaluate the correctness of solutions, their algorithmic complexity and efficiency</li> </ul> |                                                                           |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- naive approaches to problem solving</li> <li>- greedy algorithms</li> <li>- programming solution of logic problems</li> <li>- Divide and rule</li> <li>- dynamic programming</li> <li>- recursion</li> <li>- backtracking</li> <li>- state space search</li> <li>- hashing</li> <li>- optimization of algorithms</li> </ul>                                                                                                                                                                                                      |                                                                           |
| <b>Recommended literature:</b><br>Algorithmic Puzzles / Anany Levitin, Maria Levitin. Oxford University Press Inc, 2011<br>Task archive on the website: <a href="http://www.prask.ksp.sk">www.prask.ksp.sk</a><br>Task archive on the website: <a href="http://www.ksp.sk">www.ksp.sk</a>                                                                                                                                                                                                                                                                                                        |                                                                           |

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| own electronic texts published on the website, resp. in the Moodle environment           |     |     |     |     |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                             |     |     |     |     |     |
| <b>Notes:</b>                                                                            |     |     |     |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 0                  |     |     |     |     |     |
| A                                                                                        | B   | C   | D   | E   | FX  |
| 0,0                                                                                      | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Daniela Bezáková, PhD., doc. PaedDr. Monika Tomcsányiová, PhD. |     |     |     |     |     |
| <b>Last change:</b> 20.06.2022                                                           |     |     |     |     |     |
| <b>Approved by:</b>                                                                      |     |     |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                 |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-355/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Course title:</b><br>Introduction to Web Documents Formation |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                 |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                 |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                 |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                 |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-141/22 - Programming (2) or FMFI.KDMFI/1-UIN-141/15 - Programming (2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                 |
| <b>Antirequisites:</b> FMFI.KDMFI/1-AIN-112/15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                 |
| <b>Course requirements:</b><br>Continuous assessment: tasks (90%), project (10%)<br>Exam: practical<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 65%, E 60%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                 |
| <b>Learning outcomes:</b><br>After completing the course, students will be able to create a correct website (in HTML) with the correct structure and properly formatted content. The design will be solved using CSS, while it will be adapted to different devices. The site will meet the basic conditions of accessibility for people with special needs.                                                                                                                                                                                                                                                                                                             |                                                                 |
| <b>Class syllabus:</b><br>- HTML - structuring of the document, elements for content formatting, basic elements of the page, including multimedia objects, checking the correctness of the code, tables, forms and their appropriate structuring.<br>- Cascading Style Sheets (CSS) - properties and their values, selectors, pseudo-classes, properties for formatting fonts and text, tables and other objects, colors, backgrounds, lengths, units, box model, object placement, visual document formatting, styles for various devices , Media Queries, additional CSS options with respect to current versions.<br>- Basic information about website accessibility. |                                                                 |
| <b>Recommended literature:</b><br>Elizabeth Castro: HTML5 & CSS3 Visual Quickstart Guide, Computer Press, 2012, ISBN 9788025137338<br>Marek Laurenčík: Web Design in HTML and CSS, Grada, 2019, ISBN 9788027122417<br>Daniela Bezáková et al .: Data Creation and Presentation, Bratislava: Center for Scientific and Technical Information of the Slovak Republic, 2020 ISBN 978-80-89965-67-0<br>own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                        |                                                                 |

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| <b>Languages necessary to complete the course:</b><br>Slovak             |       |       |      |       |       |
| <b>Notes:</b>                                                            |       |       |      |       |       |
| <b>Past grade distribution</b><br>Total number of evaluated students: 76 |       |       |      |       |       |
| A                                                                        | B     | C     | D    | E     | FX    |
| 39,47                                                                    | 13,16 | 15,79 | 3,95 | 17,11 | 10,53 |
| <b>Lecturers:</b> doc. RNDr. Ľudmila Jašková, PhD.                       |       |       |      |       |       |
| <b>Last change:</b> 20.06.2022                                           |       |       |      |       |       |
| <b>Approved by:</b>                                                      |       |       |      |       |       |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |      |                                                                    |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |      |                                                                    |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |      |                                                                    |     |     |     |
| <b>Course ID:</b><br>PriF.KBCh/N-bCBI-027/22                                                                                                                                                          |      | <b>Course title:</b><br>Lab Practical in Biochemistry for Teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |      |                                                                    |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                           |      |                                                                    |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                       |      |                                                                    |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |      |                                                                    |     |     |     |
| <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: 4                                                                                                                               |      |                                                                    |     |     |     |
| A                                                                                                                                                                                                     | B    | C                                                                  | D   | E   | FX  |
| 50,0                                                                                                                                                                                                  | 50,0 | 0,0                                                                | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Petra Chovančíková, PhD., doc. Mgr. Peter Polčic, PhD.                                                                                                                         |      |                                                                    |     |     |     |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                        |      |                                                                    |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |      |                                                                    |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |      |                                                                           |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |      |                                                                           |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |      |                                                                           |     |     |      |
| <b>Course ID:</b><br>PriF.KAgCh/N-bUCH-038/22                                                                                                                                                         |      | <b>Course title:</b><br>Lab Practical in Inorganic Chemistry for Teachers |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 3 <b>per level/semester:</b> 42<br><b>Form of the course:</b> on-site learning |      |                                                                           |     |     |      |
| <b>Number of credits:</b> 3                                                                                                                                                                           |      |                                                                           |     |     |      |
| <b>Recommended semester:</b> 2.                                                                                                                                                                       |      |                                                                           |     |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                          |      |                                                                           |     |     |      |
| <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: 25                                                                                                                              |      |                                                                           |     |     |      |
| A                                                                                                                                                                                                     | B    | C                                                                         | D   | E   | FX   |
| 4,0                                                                                                                                                                                                   | 48,0 | 28,0                                                                      | 0,0 | 4,0 | 16,0 |
| <b>Lecturers:</b> Mgr. Dominika Lacušková, RNDr. Jana Chrappová, PhD.                                                                                                                                 |      |                                                                           |     |     |      |
| <b>Last change:</b> 09.10.2022                                                                                                                                                                        |      |                                                                           |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                   |      |                                                                           |     |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |      |                                                                         |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |      |                                                                         |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |      |                                                                         |     |     |     |
| <b>Course ID:</b><br>PriF.KOrCh/N-bUCH-005/22                                                                                                                                                         |      | <b>Course title:</b><br>Lab Practical in Organic Chemistry for Teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 1 <b>per level/semester:</b> 14<br><b>Form of the course:</b> on-site learning |      |                                                                         |     |     |     |
| <b>Number of credits:</b> 1                                                                                                                                                                           |      |                                                                         |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                       |      |                                                                         |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |      |                                                                         |     |     |     |
| <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: 25                                                                                                                              |      |                                                                         |     |     |     |
| A                                                                                                                                                                                                     | B    | C                                                                       | D   | E   | FX  |
| 68,0                                                                                                                                                                                                  | 16,0 | 12,0                                                                    | 4,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Viera Poláčková, PhD., Mgr. Peter Šramel, PhD.                                                                                                                                |      |                                                                         |     |     |     |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                        |      |                                                                         |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |      |                                                                         |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |       |                                                                          |      |      |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |       |                                                                          |      |      |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |       |                                                                          |      |      |     |
| <b>Course ID:</b><br>PriF.KFTCh/N-bUCH-003/22                                                                                                                                                         |       | <b>Course title:</b><br>Lab Practical in Physical Chemistry for Teachers |      |      |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                                          |      |      |     |
| <b>Number of credits:</b> 2                                                                                                                                                                           |       |                                                                          |      |      |     |
| <b>Recommended semester:</b> 3.                                                                                                                                                                       |       |                                                                          |      |      |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |       |                                                                          |      |      |     |
| <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: 34                                                                                                                              |       |                                                                          |      |      |     |
| A                                                                                                                                                                                                     | B     | C                                                                        | D    | E    | FX  |
| 14,71                                                                                                                                                                                                 | 44,12 | 29,41                                                                    | 8,82 | 2,94 | 0,0 |
| <b>Lecturers:</b> RNDr. Eva Noskovičová, PhD.                                                                                                                                                         |       |                                                                          |      |      |     |
| <b>Last change:</b> 22.09.2022                                                                                                                                                                        |       |                                                                          |      |      |     |
| <b>Approved by:</b>                                                                                                                                                                                   |       |                                                                          |      |      |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |       |                                                           |       |      |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |       |                                                           |       |      |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |       |                                                           |       |      |       |
| <b>Course ID:</b><br>PriF.KAgCh/N-bUCH-035/22                                                                                                                                                         |       | <b>Course title:</b><br>Laboratory Technique for Teachers |       |      |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 4 <b>per level/semester:</b> 56<br><b>Form of the course:</b> on-site learning |       |                                                           |       |      |       |
| <b>Number of credits:</b> 4                                                                                                                                                                           |       |                                                           |       |      |       |
| <b>Recommended semester:</b> 1.                                                                                                                                                                       |       |                                                           |       |      |       |
| <b>Educational level:</b> I.                                                                                                                                                                          |       |                                                           |       |      |       |
| <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: 31                                                                                                                              |       |                                                           |       |      |       |
| A                                                                                                                                                                                                     | B     | C                                                         | D     | E    | FX    |
| 6,45                                                                                                                                                                                                  | 16,13 | 16,13                                                     | 19,35 | 9,68 | 32,26 |
| <b>Lecturers:</b> RNDr. Jana Chrappová, PhD., Mgr. Dominika Lacušková                                                                                                                                 |       |                                                           |       |      |       |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                        |       |                                                           |       |      |       |
| <b>Approved by:</b>                                                                                                                                                                                   |       |                                                           |       |      |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                   |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                   |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                   |     |     |     |
| <b>Course ID:</b><br>PriF.KEM/N-bEXX-127/22                                                                                                                                                        |     | <b>Course title:</b><br>Land Conservation and Use |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                   |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                   |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                    |     |                                                   |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                   |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                 | D   | E   | FX  |
| 0,0                                                                                                                                                                                                | 0,0 | 0,0                                               | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Katarína Pavličková, CSc., Mgr. Marta Nevřelová, PhD., RNDr. Jana Ružičková, PhD., Mgr. Blanka Lehotská, PhD.                                                         |     |                                                   |     |     |     |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                     |     |                                                   |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                   |     |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                    |       |                                   |      |      |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------|------|------|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                   |      |      |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                   |      |      |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                   |      |      |       |
| <b>Course ID:</b><br>PriF.KJ/N-bXCJ-138/22                                                                                                                                                         |       | <b>Course title:</b><br>Latinčina |      |      |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                   |      |      |       |
| <b>Number of credits:</b> 2                                                                                                                                                                        |       |                                   |      |      |       |
| <b>Recommended semester:</b> 1., 2..                                                                                                                                                               |       |                                   |      |      |       |
| <b>Educational level:</b> I.                                                                                                                                                                       |       |                                   |      |      |       |
| <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: 132                                                                                                                          |       |                                   |      |      |       |
| A                                                                                                                                                                                                  | B     | C                                 | D    | E    | FX    |
| 61,36                                                                                                                                                                                              | 12,88 | 4,55                              | 6,06 | 3,03 | 12,12 |
| <b>Lecturers:</b> Mgr. Ivan Lábaj, PhD., RNDr. Tatiana Slováková, PhD.                                                                                                                             |       |                                   |      |      |       |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                     |       |                                   |      |      |       |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                   |      |      |       |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-345/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Linux |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| <b>Druh, rozsah, metódy a pracovná záťaž študenta - doplňujúce informácie</b><br>talk, 1h/week, online synchronous<br>training, 1h/week, online synchronous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |
| <b>Course requirements:</b><br>Continuous assessment: practical computer tasks 60%<br>Exam: practical computer test 40%<br>Indicative assessment scale: A 92%, B 84%, C 76%, D 68%, E 60%<br>Scale of assessment (preliminary/final): 60/40                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                               |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- knows the principle and function of the command line</li> <li>- knows the principles of operation of the GNU / Linux operating system</li> <li>- knows and understands the basic components of the GNU / Linux OS such as process, file system, user administration, access rights, ...</li> <li>- recognizes and applies a set of commands according to scenarios</li> <li>- creates a "one - line compound command" or a simple task assignment script</li> </ul>                                                                                                                                                          |                               |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- History and philosophy of GNU / Linux. Text console. File system navigation. (pwd, ls, cd, less, cat, man, w, exit, ssh, mosh, ...)</li> <li>- Folders and files (mkdir, rmdir, rm, cp, mv, ...)</li> <li>- Users, groups, redirects and search. Regular expressions. (id, su, passwd, grep, ...)</li> <li>- Attributes of files and folders (chown, chgrp, chmod, ...)</li> <li>- Text editor I know</li> <li>- File sorting and selection commands (sort, head, tail, nl, uniq, tac, shuf)</li> <li>- File system search (find)</li> <li>- Processes (ps, top, kill)</li> <li>- sed - stream editor</li> <li>- Processing with awk</li> </ul> |                               |



|                                                                                                                                                                        |      |     |      |      |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|------|-----|
| - Basics of bash scripts                                                                                                                                               |      |     |      |      |     |
| <b>Recommended literature:</b><br>vlastné elektronické texty zverejňované na webovej stránke<br>elektronické materiály, tutoriály a manuály k operačnému systému Linux |      |     |      |      |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                           |      |     |      |      |     |
| <b>Notes:</b>                                                                                                                                                          |      |     |      |      |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 48                                                                                               |      |     |      |      |     |
| A                                                                                                                                                                      | B    | C   | D    | E    | FX  |
| 87,5                                                                                                                                                                   | 2,08 | 0,0 | 8,33 | 2,08 | 0,0 |
| <b>Lecturers:</b> RNDr. Marek Nagy, PhD., doc. RNDr. Ľubomír Salanci, PhD.                                                                                             |      |     |      |      |     |
| <b>Last change:</b> 23.06.2022                                                                                                                                         |      |     |      |      |     |
| <b>Approved by:</b>                                                                                                                                                    |      |     |      |      |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |                                                     |     |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |                                                     |     |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                                                     |     |      |      |
| <b>Course ID:</b><br>PriF.KPI/N-XXXX-008/21                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     | <b>Course title:</b><br>Man as a part of the nature |     |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                |     |                                                     |     |      |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |                                                     |     |      |      |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |                                                     |     |      |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |                                                     |     |      |      |
| <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: 580                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                                                     |     |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | B   | C                                                   | D   | E    | FX   |
| 90,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0,0 | 0,0                                                 | 0,0 | 0,17 | 9,83 |
| <b>Lecturers:</b> RNDr. Martina Zvaríková, PhD., prof. RNDr. Pavel Dlapa, PhD., RNDr. Malvína Čierniková, PhD., prof. RNDr. Elena Masarovičová, DrSc., prof. PaedDr. Pavol Prokop, DrSc., prof. RNDr. Peter Fedor, DrSc., prof. Ing. Eva Chmielewská, CSc., RNDr. Martin Labuda, PhD., doc. RNDr. Eva Pauditšová, PhD., RNDr. Hubert Žarnovičan, PhD., doc. RNDr. Stanislav Rapant, DrSc., doc. RNDr. Ľubomír Jurkovič, PhD., doc. Mgr. Tomáš Lánczos, PhD., doc. RNDr. Katarína Pavličková, CSc. |     |                                                     |     |      |      |
| <b>Last change:</b> 09.11.2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |                                                     |     |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     |                                                     |     |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                     |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                     |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                     |      |     |     |
| <b>Course ID:</b><br>PriF/N-bUXX-001/22                                                                                                                                                                               |       | <b>Course title:</b><br>Mathematics |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |       |                                     |      |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |       |                                     |      |     |     |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                       |       |                                     |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                     |      |     |     |
| <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: 11                                                                                                                                              |       |                                     |      |     |     |
| A                                                                                                                                                                                                                     | B     | C                                   | D    | E   | FX  |
| 54,55                                                                                                                                                                                                                 | 18,18 | 18,18                               | 9,09 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Peter Vankúš, PhD.                                                                                                                                                                          |       |                                     |      |     |     |
| <b>Last change:</b> 06.11.2022                                                                                                                                                                                        |       |                                     |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                     |      |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                           |                                                                  |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                         |                                                                  |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                               |                                                                  |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-101/22                                                                                                                                                                                                                                                                                                                                              | <b>Course title:</b><br>Mathematics for Informatics Teachers (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                  |                                                                  |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                               |                                                                  |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                           |                                                                  |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                              |                                                                  |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-121/22 - Informatics (1)                                                                                                                                                                                                                                                                                                                           |                                                                  |
| <b>Course requirements:</b><br>Continuous assessment: The student will receive 30% points for active work in exercises, 30% points for homework and 40% points for papers.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                            |                                                                  |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- will be able to defend or refute mathematical statements (from given topics)</li> <li>- can combine and apply knowledge from different mathematical areas</li> <li>- acquire mathematical culture, way of thinking and expression</li> </ul>                                                           |                                                                  |
| <b>Class syllabus:</b><br>Course contents: <ul style="list-style-type: none"> <li>- Mathematical expressions</li> <li>- Propositional logic</li> <li>- Predicate logic</li> <li>- Introduction to number theory</li> <li>- Types of evidence</li> <li>- Mathematical induction</li> <li>- Sets</li> <li>- Sessions</li> <li>- Features</li> <li>- Combinatorics</li> </ul>                |                                                                  |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment<br>Olejár, D., Škoviera, M. : Discrete Mathematics 1: Introduction to Set Theory, Theory of Boolean Functions and Mathematical Logic. Bratislava: Comenius University, 1992<br>Matoušek, J., Nešetřil, J. : Chapters from discrete mathematics. Charles University, 2009 |                                                                  |
| <b>Languages necessary to complete the course:</b>                                                                                                                                                                                                                                                                                                                                        |                                                                  |

|                                                                                     |       |       |      |       |       |
|-------------------------------------------------------------------------------------|-------|-------|------|-------|-------|
| Slovak                                                                              |       |       |      |       |       |
| <b>Notes:</b>                                                                       |       |       |      |       |       |
| <b>Past grade distribution</b>                                                      |       |       |      |       |       |
| Total number of evaluated students: 54                                              |       |       |      |       |       |
| A                                                                                   | B     | C     | D    | E     | FX    |
| 27,78                                                                               | 20,37 | 18,52 | 9,26 | 12,96 | 11,11 |
| <b>Lecturers:</b> PaedDr. Daniela Bezáková, PhD., doc. RNDr. Zuzana Kubincová, PhD. |       |       |      |       |       |
| <b>Last change:</b> 20.06.2022                                                      |       |       |      |       |       |
| <b>Approved by:</b>                                                                 |       |       |      |       |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                  |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                  |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-102/22                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Mathematics for Informatics Teachers (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                       |                                                                  |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                  |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                  |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                  |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-101/22 - Mathematics for Informatics Teachers (1) or<br>FMFI.KDMFI+KAI/1-UIN-101/15 - Mathematics for Informatics Teachers (1)                                                                                                                                                                                                                                                                                                   |                                                                  |
| <b>Course requirements:</b><br>active participation in seminars and at least 50% of the ongoing evaluation<br>Continuous assessment: homework (50%), papers (50%)<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                   |                                                                  |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- will be able to classify different types of graphs and construct a graph with given properties</li> <li>- will be able to use analytical geometry to solve selected problems of planimetry</li> <li>- can explain and apply the relationship between totals and recurrence</li> <li>- will be able to apply the acquired knowledge in programming</li> </ul>                         |                                                                  |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Graphs - basic concepts, representations, types of graphs</li> <li>- Graph continuity, graph travel</li> <li>- Distances in graphs</li> <li>- Trees, skeletons</li> <li>- Eulerian graphs</li> <li>- Analytic geometry in the plane - vectors</li> <li>- Analytical geometry in the plane - lines</li> <li>- Analytical geometry in the plane - circle</li> <li>- Sums</li> <li>- Recurrence</li> </ul> |                                                                  |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment<br>Knor, M. Combinatorics and Graph Theory I, Comenius University, Bratislava, 2000<br>Belan, A. Analytic geometry for those who need to understand it                                                                                                                                                                                                 |                                                                  |
| <b>Languages necessary to complete the course:</b>                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                  |

|                                                                                     |       |       |      |      |      |
|-------------------------------------------------------------------------------------|-------|-------|------|------|------|
| Slovak                                                                              |       |       |      |      |      |
| <b>Notes:</b>                                                                       |       |       |      |      |      |
| <b>Past grade distribution</b>                                                      |       |       |      |      |      |
| Total number of evaluated students: 44                                              |       |       |      |      |      |
| A                                                                                   | B     | C     | D    | E    | FX   |
| 43,18                                                                               | 13,64 | 31,82 | 4,55 | 4,55 | 2,27 |
| <b>Lecturers:</b> PaedDr. Daniela Bezáková, PhD., doc. RNDr. Zuzana Kubincová, PhD. |       |       |      |      |      |
| <b>Last change:</b> 20.06.2022                                                      |       |       |      |      |      |
| <b>Approved by:</b>                                                                 |       |       |      |      |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------|-------|-------|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                             |       |       |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                             |       |       |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                             |       |       |       |
| <b>Course ID:</b><br>PriF.KOrCh/N-bBXX-015/22                                                                                                                                                                         |       | <b>Course title:</b><br>Medicinal Chemistry |       |       |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |       |                                             |       |       |       |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |       |                                             |       |       |       |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                       |       |                                             |       |       |       |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                             |       |       |       |
| <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: 306                                                                                                                                             |       |                                             |       |       |       |
| A                                                                                                                                                                                                                     | B     | C                                           | D     | E     | FX    |
| 26,14                                                                                                                                                                                                                 | 13,07 | 16,99                                       | 10,46 | 13,73 | 19,61 |
| <b>Lecturers:</b> doc. RNDr. Andrej Boháč, CSc.                                                                                                                                                                       |       |                                             |       |       |       |
| <b>Last change:</b> 25.07.2022                                                                                                                                                                                        |       |                                             |       |       |       |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                             |       |       |       |



## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-138/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Course title:</b><br>Modern Teacher Software |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                 |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UXX-137/22 - Digital Literacy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                 |
| <b>Course requirements:</b><br>Continuous assessment: project - course website (25%), assignments (75%)<br>Indicative grading scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                 |
| <b>Learning outcomes:</b><br>Students will be able to assess what activities teachers do and how digital technology can help them do this.<br>They are familiar with digital tools for creating attractive educational materials and have their own experience with them. They are able to use digital tools to create learning materials that focus on discovery learning where the activity is in the hands of the learner.<br>They are familiar with frequently used complex learning management systems (LMS). They are able to evaluate the strengths and weaknesses of using an LMS for specific activities of teaching practice and are familiar with alternative software that allows some of these activities to be carried out more efficiently.<br>They are able to create their own website and add different forms of content to it.<br>They are able to reflect on the use of specific digital tools in their future teaching. They are able to find the appropriate digital tools for a given activity, analyse them and, based on this analysis, choose among competing tools the one that additionally meets their needs. |                                                 |
| <b>Class syllabus:</b><br>Students work on a variety of topics using digital technologies and assess how they perceive their potential in their teaching practice. They publish the products of their work along with a reflection on the topic on their website.<br>The topics they are working on include:<br>The use of digital tools in the classroom<br>Creating your own digital learning materials<br>Working with graphics, photo editing, creating animations<br>Working with video<br>Working with sound<br>Learning management systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |

|                                                                                                                                                                                                 |       |      |     |     |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-----|-----|------|
| Creating mind maps                                                                                                                                                                              |       |      |     |     |      |
| <b>Recommended literature:</b><br>Design of digital educational environment / Michal Černý. Brno: Flow, 2020.<br>own electronic texts published on the website, resp. in the Moodle environment |       |      |     |     |      |
| <b>Languages necessary to complete the course:</b><br>Slovak, English                                                                                                                           |       |      |     |     |      |
| <b>Notes:</b>                                                                                                                                                                                   |       |      |     |     |      |
| <b>Past grade distribution</b><br>Total number of evaluated students: 158                                                                                                                       |       |      |     |     |      |
| A                                                                                                                                                                                               | B     | C    | D   | E   | FX   |
| 74,05                                                                                                                                                                                           | 15,19 | 6,33 | 0,0 | 1,9 | 2,53 |
| <b>Lecturers:</b> Mgr. Mária Čujdíková, PhD.                                                                                                                                                    |       |      |     |     |      |
| <b>Last change:</b> 22.06.2022                                                                                                                                                                  |       |      |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                             |       |      |     |     |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-346/15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Multimedia |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                    |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                    |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                    |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                    |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                    |
| <b>Course requirements:</b><br>Continuous assessment: Students can get 100% points for completing assignments on individual topics.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                     |                                    |
| <b>Learning outcomes:</b><br>Students are able to create and edit a variety of multimedia content. They can use digital tools to process graphics, audio and video. They understand the principles of digital media processing. They are able to integrate outdoor activities into the classroom using mobile applications and design assignments for this type of learning activity. They are able to use virtual and augmented reality in education.                                                                                                                                                                      |                                    |
| <b>Class syllabus:</b><br><ul style="list-style-type: none"> <li>- creation of graphic design using online tools</li> <li>- photo editing</li> <li>- work with 3D graphics</li> <li>- working with vector graphics in a children's programming environment</li> <li>- collaborative creation and verification of outdoor educational activities using a mobile application</li> <li>- Collaborative video creation and processing using more complex editing</li> <li>- work with sound in video editor</li> <li>- getting acquainted with the possibilities of using virtual and augmented reality in education</li> </ul> |                                    |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                    |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                    |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                    |

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|--------------------------------------------------------------------------------------|------|------|-----|-----|-----|
| <b>Past grade distribution</b>                                                       |      |      |     |     |     |
| Total number of evaluated students: 16                                               |      |      |     |     |     |
| A                                                                                    | B    | C    | D   | E   | FX  |
| 87,5                                                                                 | 6,25 | 6,25 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Mária Čujdíková, PhD., doc. PaedDr. Monika Tomcsányiová, PhD. |      |      |     |     |     |
| <b>Last change:</b> 22.06.2022                                                       |      |      |     |     |     |
| <b>Approved by:</b>                                                                  |      |      |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |                                           |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |                                           |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |                                           |     |     |     |
| <b>Course ID:</b><br>PriF.KOrCh/N-bUCH-041/22                                                                                                                                                                         |     | <b>Course title:</b><br>Natural Compounds |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |     |                                           |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |     |                                           |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                       |     |                                           |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |                                           |     |     |     |
| <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                                                                                                                                                                                                                     | B   | C                                         | D   | E   | FX  |
| 0,0                                                                                                                                                                                                                   | 0,0 | 0,0                                       | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Ambroz Almáßy, PhD.                                                                                                                                                                            |     |                                           |     |     |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                                        |     |                                           |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |                                           |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                       |      |                                                                   |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                     |      |                                                                   |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                           |      |                                                                   |     |     |     |
| <b>Course ID:</b><br>PriF.KOrCh/N-bCOR-024/22                                                                                                                                                         |      | <b>Course title:</b><br>Organic Chemistry Practicals for Teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 4 <b>per level/semester:</b> 56<br><b>Form of the course:</b> on-site learning |      |                                                                   |     |     |     |
| <b>Number of credits:</b> 4                                                                                                                                                                           |      |                                                                   |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                       |      |                                                                   |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                          |      |                                                                   |     |     |     |
| <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: 4                                                                                                                               |      |                                                                   |     |     |     |
| A                                                                                                                                                                                                     | B    | C                                                                 | D   | E   | FX  |
| 25,0                                                                                                                                                                                                  | 50,0 | 25,0                                                              | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Viera Poláčková, PhD., Mgr. Peter Šramel, PhD.                                                                                                                                |      |                                                                   |     |     |     |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                        |      |                                                                   |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                   |      |                                                                   |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |      |                                                        |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |      |                                                        |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |      |                                                        |      |      |      |
| <b>Course ID:</b><br>PriF.KOrCh/N-bUCH-004/22                                                                                                                                                                         |      | <b>Course title:</b><br>Organic Chemistry for Teachers |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 4 / 2 <b>per level/semester:</b> 56 / 28<br><b>Form of the course:</b> on-site learning |      |                                                        |      |      |      |
| <b>Number of credits:</b> 6                                                                                                                                                                                           |      |                                                        |      |      |      |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                       |      |                                                        |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |      |                                                        |      |      |      |
| <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: 20                                                                                                                                              |      |                                                        |      |      |      |
| A                                                                                                                                                                                                                     | B    | C                                                      | D    | E    | FX   |
| 20,0                                                                                                                                                                                                                  | 25,0 | 15,0                                                   | 15,0 | 10,0 | 15,0 |
| <b>Lecturers:</b> doc. Ing. Mária Mečiarová, PhD.                                                                                                                                                                     |      |                                                        |      |      |      |
| <b>Last change:</b> 27.07.2022                                                                                                                                                                                        |      |                                                        |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |      |                                                        |      |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Course ID:</b><br>FMFI.KAI/1-UXX-231/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Course title:</b><br>Pedagogic Communication |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Antirequisites:</b> FMFI-Prif.KDPP/1-UXX-231/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                 |
| <b>Course requirements:</b><br>The course is completed by assessment, the ratio of interim/final assessment is 80/20. The condition for successful completion of the course is obtaining at least 60 % of the maximum possible course grade. Assignments during the semester in the form of micro-assignments, model communication situations, student-designed and recorded video sequences, analysis of recordings, and an emphasis on strengthening communication competencies and skills will be assessed.<br>Assessment will be given on a scale:<br>A: 93-100%, excellent - outstanding results,<br>B: 85-92%, very good - above average standard,<br>C: 76-84%, good - normal reliable work,<br>D: 68-75%, satisfactory - acceptable results,<br>E: 60-67%, satisfactory - results meet minimum criteria,<br>Fx: 0-59%, inadequate - extra work required<br>Translated with <a href="http://www.DeepL.com/Translator">www.DeepL.com/Translator</a> (free version)<br>Scale of assessment (preliminary/final): 80/20 |                                                 |
| <b>Learning outcomes:</b><br>Upon successful completion of the course, students have knowledge of the principles of effective pedagogical communication. They are able to analyze communication episodes, identify problematic communication aspects and create communication opportunities and learning environments that promote student participation in the classroom. They understand the importance and methods of managing pedagogical communication in school classrooms. They can anticipate and respond appropriately to a variety of communication situations. Through the implementation of micro-outcomes and other forms of training in effective pedagogical communication, they are able to apply the acquired theoretical knowledge in the practice of primary and secondary schools.                                                                                                                                                                                                                     |                                                 |
| <b>Class syllabus:</b><br>Insights into the phylogenetic and ontogenetic aspects of interpersonal communication, social communication, interaction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |



Communication styles, communication competences and skills of future teachers, their practice and strengthening.

Pedagogical communication -functions, planes, ways, components, directions, effectiveness, basic rules, organizational forms of pedagogical communication, non-verbal (extralinguistic means and paralinguistic aspects of speech) and verbal (written and oral) communication in the school classroom, teacher management of communication (questions, feedback), pupil participation in communication, persuasion, argumentation, criticism, school language, IRF/IRE structure, communication by action in the classroom, space in communication, methods of investigating pedagogical communication.

Types of conflict in school settings, strategies and methods of conflict resolution.

Errors in pedagogical communication. Humour in the school classroom.

Intergenerational communication in education.

#### **Recommended literature:**

BARKER, A. 2020. Zlepšete své komunikační schopnosti. Lingea.

GAVORA, P. 2007. Učiteľ a žiaci v komunikácii. Bratislava : UK.

HALÁKOVÁ, Z. 2012. Pedagogická komunikácia. 1. vyd., Bratislava : Univerzita Komenského.

MAREŠ, J., KŘIVOHLAVÝ, I. 1995. Komunikace ve škole. Brno : Masarykova univerzita.

MIKULÁŠTÍK, M. 2003. Komunikační dovednosti v praxi. Praha : Grada Publishing.

NELEŠOVSKÁ, A. 2005. Pedagogická komunikace v teorii a praxi. Praha : Grada.

PECH, J. 2009. Řeč těla a umění komunikace. Praha : NS Svoboda.

ŠEĐOVÁ, K. 2013. Humor ve škole. Brno : Masarykova univerzita.

ŠEĐOVÁ, K. a kol. 2019. Výuková komunikace. Brno: Masarykova univerzita.

ŠEĐOVÁ, K., ŠVARÍČEK, R., ŠALAMOUNOVÁ Z. 2012. Komunikace ve školní třídě. Praha : Portál.

ŠTĚPANÍK, J. 2005. Umění jednat s lidmi 2. Komunikace. Praha : Grada.

VYBÍRAL, Z. a kol. 2009. Psychologie komunikace. Praha : Portál.

aktuálne články a štúdie

#### **Languages necessary to complete the course:**

Slovak, Czech

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 101

| A     | B    | C    | D    | E    | FX   |
|-------|------|------|------|------|------|
| 85,15 | 6,93 | 0,99 | 2,97 | 1,98 | 1,98 |

**Lecturers:** doc. RNDr. Martin Takáč, PhD.

**Last change:** 20.06.2022

**Approved by:**

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|---------------------------------------------------|------|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                                   |      |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                                   |      |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                                   |      |     |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-014/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>Pedagogical Communication |      |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |     |       |                                                   |      |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |     |       |                                                   |      |     |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                       |     |       |                                                   |      |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                                   |      |     |      |
| <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: 66                                                                                                                                              |     |       |                                                   |      |     |      |
| A                                                                                                                                                                                                                     | ABS | B     | C                                                 | D    | E   | FX   |
| 65,15                                                                                                                                                                                                                 | 0,0 | 21,21 | 6,06                                              | 6,06 | 0,0 | 1,52 |
| <b>Lecturers:</b> doc. RNDr. PaedDr. Zuzana Haláková, PhD.                                                                                                                                                            |     |       |                                                   |      |     |      |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                                        |     |       |                                                   |      |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                                   |      |     |      |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UXX-143/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Pedagogical Interviews |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 1 per level/semester: 14</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Course requirements:</b><br>active participation in classes (discussion, presentation of opinions, ...) (80%),<br>homeworks (reading texts, preparation of essays and presentations ...) (20%)<br>Scale of assessment (preliminary/final): 100 / 0                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- begins to think about education from the teacher's point of view.</li> <li>- is able to discuss personal and educational challenges in the teaching profession.</li> <li>- will be able to identify, compare and express a constructive opinion on the current state of the school in the context of modern concepts of education.</li> <li>- will perceive the potential of the teaching profession to positively influence the quality of life of its students.</li> </ul> |                                                |
| <b>Class syllabus:</b><br>Course contents: <ul style="list-style-type: none"> <li>- from student to teacher</li> <li>- vision of modern education</li> <li>- the teacher as a positive role model</li> <li>- creativity in professional subjects</li> <li>- a school where students enjoy</li> <li>- personal development</li> <li>- how to burn and not burn</li> <li>- a school for everyone</li> </ul>                                                                                                                                                       |                                                |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment<br>JANÍK, T .: Myths of False Error. About chibas in education and pedagogy. Masaryk University. 2020.<br>ČOKYNA, J .: And where are your edges? N Press. 2019                                                                                                                                                                                                                                                                                 |                                                |

KUBÍKOVÁ, S .: Klub nezbitných detí. Seven things that will help your children survive in modern times. Diary Postoj 2018.  
JANÍK, T .: Lessons from pedagogy: Everything for education. Ammunition 2021

**Languages necessary to complete the course:**

Slovak, English

**Notes:**

**Past grade distribution**

Total number of evaluated students: 0

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

**Lecturers:** prof. RNDr. Ivan Kalaš, PhD., Mgr. Karolína Miková, PhD.

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                   |      |                                                   |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                 |      |                                                   |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                       |      |                                                   |      |     |     |
| <b>Course ID:</b><br>PriF.KOrCh/N-bCXX-012/22                                                                                                                                                                                                                                                                                                                     |      | <b>Course title:</b><br>Perspectives in Chemistry |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                |      |                                                   |      |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                       |      |                                                   |      |     |     |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                   |      |                                                   |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                      |      |                                                   |      |     |     |
| <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: 10                                                                                                                                                                                                                                                                                          |      |                                                   |      |     |     |
| A                                                                                                                                                                                                                                                                                                                                                                 | B    | C                                                 | D    | E   | FX  |
| 10,0                                                                                                                                                                                                                                                                                                                                                              | 70,0 | 10,0                                              | 10,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Martin Putala, CSc., doc. RNDr. Oľga Rosскопfová, PhD., prof. Ing. Dušan Velič, DrSc., prof. RNDr. Ivan Černušák, DrSc., RNDr. Milan Sýkora, PhD., Mgr. Peter Hrobárik, PhD., doc. RNDr. Erik Rakovský, PhD., RNDr. Marek Cigán, PhD., prof. RNDr. Marian Masár, PhD., doc. Mgr. Peter Polčic, PhD., doc. RNDr. Radoslav Halko, PhD. |      |                                                   |      |     |     |
| <b>Last change:</b> 10.10.2022                                                                                                                                                                                                                                                                                                                                    |      |                                                   |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                               |      |                                                   |      |     |     |

## COURSE DESCRIPTION

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------|------|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                          |       |                                                   |      |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                        |       |                                                   |      |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                              |       |                                                   |      |     |      |
| <b>Course ID:</b><br>PriF.KJCh/N-XXXX-011/21                                                                                                                                                                                             |       | <b>Course title:</b><br>Perspectives in Chemistry |      |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                       |       |                                                   |      |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                              |       |                                                   |      |     |      |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                                                  |       |                                                   |      |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                        |       |                                                   |      |     |      |
| <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: 22                                                                                                                                                                 |       |                                                   |      |     |      |
| A                                                                                                                                                                                                                                        | B     | C                                                 | D    | E   | FX   |
| 22,73                                                                                                                                                                                                                                    | 45,45 | 18,18                                             | 4,55 | 0,0 | 9,09 |
| <b>Lecturers:</b> RNDr. Marek Cigáň, PhD., doc. RNDr. Martin Putala, CSc., prof. Ing. Dušan Velič, DrSc., prof. RNDr. Ivan Černušák, DrSc., doc. RNDr. Erik Rakovský, PhD., Mgr. Peter Hrobárik, PhD., doc. RNDr. Oľga Roszkopfová, PhD. |       |                                                   |      |     |      |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                                                           |       |                                                   |      |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                                      |       |                                                   |      |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                                                      |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                                                      |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                            |     |                                                      |     |     |     |
| <b>Course ID:</b><br>PriF.KBCh/N-XXXX-010/22                                                                                                                                                                                                                                                                                                                                                                                                                           |     | <b>Course title:</b><br>Perspectives of Biochemistry |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                     |     |                                                      |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |                                                      |     |     |     |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                                                                                                                                                                                                                                                                                                |     |                                                      |     |     |     |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                                                      |     |     |     |
| <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: 17                                                                                                                                                                                                                                                                                                                                                                                               |     |                                                      |     |     |     |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | B   | C                                                    | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0,0 | 0,0                                                  | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Marek Mentel, PhD., Mgr. Filip Brázdovič, PhD., Mgr. Andrea Cillingová, PhD., prof. RNDr. Anton Horváth, CSc., Mgr. Stanislav Huszár, PhD., Mgr. Petra Chovančíková, PhD., prof. RNDr. Marta Kollárová, DrSc., doc. RNDr. Jana Korduláková, PhD., prof. RNDr. Katarína Mikušová, DrSc., Ing. Martina Neboháčová, PhD., doc. Mgr. Peter Polčic, PhD., RNDr. Ingrid Sveráková, PhD., doc. RNDr. Igor Zeman, PhD., Mgr. Júlia Zemanová, PhD. |     |                                                      |     |     |     |
| <b>Last change:</b> 19.09.2022                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |                                                      |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |                                                      |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                          |       |                                                         |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                        |       |                                                         |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                              |       |                                                         |      |      |      |
| <b>Course ID:</b><br>PriF.KFR/N-bBXX-002/22                                                                                                                                                                                                                                                                                                                                              |       | <b>Course title:</b><br>Perspectives of Current Biology |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                       |       |                                                         |      |      |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                              |       |                                                         |      |      |      |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                          |       |                                                         |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                             |       |                                                         |      |      |      |
| <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: 254                                                                                                                                                                                                                                                                                                                |       |                                                         |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                        | B     | C                                                       | D    | E    | FX   |
| 66,14                                                                                                                                                                                                                                                                                                                                                                                    | 15,35 | 8,27                                                    | 1,18 | 0,79 | 8,27 |
| <b>Lecturers:</b> doc. Mgr. Michal Martinka, PhD., prof. RNDr. Ľubomír Tomáška, DrSc., prof. RNDr. Karol Mičieta, PhD., doc. RNDr. Radoslav Beňuš, PhD., prof. RNDr. Ján Turňa, CSc., prof. RNDr. Michal Zeman, DrSc., doc. Mgr. Peter Vďačný, Dr.rer.nat, doc. RNDr. Stanislav Stuchlík, PhD., prof. RNDr. Yveta Gbelská, CSc., doc. RNDr. Tomáš Derka, PhD., RNDr. Boris Klempa, DrSc. |       |                                                         |      |      |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                                           |       |                                                         |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                      |       |                                                         |      |      |      |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                                         |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                                         |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                                         |      |      |      |
| <b>Course ID:</b><br>PriF.KFTCh/N-bUCH-002/22                                                                                                                                                                         |       | <b>Course title:</b><br>Physical Chemistry for Teachers |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 3 / 2 <b>per level/semester:</b> 42 / 28<br><b>Form of the course:</b> on-site learning |       |                                                         |      |      |      |
| <b>Number of credits:</b> 5                                                                                                                                                                                           |       |                                                         |      |      |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                       |       |                                                         |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                                         |      |      |      |
| <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                                                                                                                                                                                                                     | B     | C                                                       | D    | E    | FX   |
| 28,13                                                                                                                                                                                                                 | 21,88 | 15,63                                                   | 6,25 | 3,13 | 25,0 |
| <b>Lecturers:</b> doc. RNDr. Ivan Valent, CSc., prof. Ing. Dušan Velič, DrSc., doc. Ing. Marián Janek, PhD.                                                                                                           |       |                                                         |      |      |      |
| <b>Last change:</b> 22.09.2022                                                                                                                                                                                        |       |                                                         |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                                         |      |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |      |                                              |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |      |                                              |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |      |                                              |     |     |      |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-101/22                                                                                                                                                                                                                             |      | <b>Course title:</b><br>Physical Education 1 |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                   |      |                                              |     |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |      |                                              |     |     |      |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                         |      |                                              |     |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |      |                                              |     |     |      |
| <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: 365                                                                                                                                                                                               |      |                                              |     |     |      |
| A                                                                                                                                                                                                                                                                       | B    | C                                            | D   | E   | FX   |
| 92,05                                                                                                                                                                                                                                                                   | 1,64 | 0,27                                         | 0,0 | 0,0 | 6,03 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |      |                                              |     |     |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |      |                                              |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |      |                                              |     |     |      |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |     |                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-102/22                                                                                                                                                                                                                             |     | <b>Course title:</b><br>Physical Education 2 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                   |     |                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |     |                                              |     |     |     |
| <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: 153                                                                                                                                                                                               |     |                                              |     |     |     |
| A                                                                                                                                                                                                                                                                       | B   | C                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                                                                   | 0,0 | 0,0                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |     |                                              |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |     |                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |     |                                              |     |     |     |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------|-----|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |      |                                              |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |      |                                              |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |      |                                              |     |     |      |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-103/22                                                                                                                                                                                                                             |      | <b>Course title:</b><br>Physical Education 3 |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                   |      |                                              |     |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |      |                                              |     |     |      |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                         |      |                                              |     |     |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |      |                                              |     |     |      |
| <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: 211                                                                                                                                                                                               |      |                                              |     |     |      |
| A                                                                                                                                                                                                                                                                       | B    | C                                            | D   | E   | FX   |
| 95,26                                                                                                                                                                                                                                                                   | 0,47 | 0,95                                         | 0,0 | 0,0 | 3,32 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |      |                                              |     |     |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |      |                                              |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |      |                                              |     |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |     |                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-104/22                                                                                                                                                                                                                             |     | <b>Course title:</b><br>Physical Education 4 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                          |     |                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |     |                                              |     |     |     |
| <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: 178                                                                                                                                                                                               |     |                                              |     |     |     |
| A                                                                                                                                                                                                                                                                       | B   | C                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                                                                   | 0,0 | 0,0                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |     |                                              |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |     |                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |     |                                              |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |     |                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-105/22                                                                                                                                                                                                                             |     | <b>Course title:</b><br>Physical Education 5 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                   |     |                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |     |                                              |     |     |     |
| <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: 154                                                                                                                                                                                               |     |                                              |     |     |     |
| A                                                                                                                                                                                                                                                                       | B   | C                                            | D   | E   | FX  |
| 96,1                                                                                                                                                                                                                                                                    | 1,3 | 0,0                                          | 0,0 | 0,0 | 2,6 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |     |                                              |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |     |                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |     |                                              |     |     |     |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                       |     |                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-106/22                                                                                                                                                                                                                             |     | <b>Course title:</b><br>Physical Education 6 |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                   |     |                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                             |     |                                              |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                         |     |                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                            |     |                                              |     |     |     |
| <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: 123                                                                                                                                                                                               |     |                                              |     |     |     |
| A                                                                                                                                                                                                                                                                       | B   | C                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                                                                   | 0,0 | 0,0                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, PaedDr. Vladimír Pajkoš, Mgr. Dana Szélllová, Mgr. Denisa Šed'ová |     |                                              |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                          |     |                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                     |     |                                              |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |      |                                 |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |      |                                 |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |      |                                 |      |     |     |
| <b>Course ID:</b><br>PriF/N-bUXX-002/22                                                                                                                                                                               |      | <b>Course title:</b><br>Physics |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning |      |                                 |      |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |      |                                 |      |     |     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                       |      |                                 |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |      |                                 |      |     |     |
| <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                                                                                                                                                                                                                     | B    | C                               | D    | E   | FX  |
| 16,67                                                                                                                                                                                                                 | 40,0 | 36,67                           | 6,67 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Lukáš Bartošovič, PhD., doc. PaedDr. Viera Haverlíková, PhD.                                                                                                                                |      |                                 |      |     |     |
| <b>Last change:</b> 17.10.2022                                                                                                                                                                                        |      |                                 |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |      |                                 |      |     |     |



## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------|-----|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                                  |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                                  |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                                  |     |     |      |
| <b>Course ID:</b><br>PriF.KBo/N-XXXX-003/21                                                                                                                                                        |       | <b>Course title:</b><br>Plants known and unknown |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                                  |     |     |      |
| <b>Number of credits:</b> 3                                                                                                                                                                        |       |                                                  |     |     |      |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                            |       |                                                  |     |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                  |       |                                                  |     |     |      |
| <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: 460                                                                                                                          |       |                                                  |     |     |      |
| A                                                                                                                                                                                                  | B     | C                                                | D   | E   | FX   |
| 70,43                                                                                                                                                                                              | 21,96 | 3,7                                              | 0,0 | 0,0 | 3,91 |
| <b>Lecturers:</b> Ing. Mgr. Eva Zahradníková, PhD., doc. Mgr. Katarína Mišíková, PhD., doc. RNDr. Jana Ščevková, PhD.                                                                              |       |                                                  |     |     |      |
| <b>Last change:</b> 30.08.2022                                                                                                                                                                     |       |                                                  |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                                  |     |     |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                |     |                                                                    |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                              |     |                                                                    |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                    |     |                                                                    |     |     |       |
| <b>Course ID:</b><br>PriF.KRGRR/N-XXXX-002/21                                                                                                                                                                                                                                                                                                                                  |     | <b>Course title:</b><br>Practical Geography for Natural Scientists |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning                                                                                                                                                          |     |                                                                    |     |     |       |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                    |     |                                                                    |     |     |       |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                                                                                                                                                                                        |     |                                                                    |     |     |       |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                              |     |                                                                    |     |     |       |
| <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: 43                                                                                                                                                                                                                                                                                                       |     |                                                                    |     |     |       |
| A                                                                                                                                                                                                                                                                                                                                                                              | B   | C                                                                  | D   | E   | FX    |
| 83,72                                                                                                                                                                                                                                                                                                                                                                          | 0,0 | 0,0                                                                | 0,0 | 0,0 | 16,28 |
| <b>Lecturers:</b> Mgr. Rastislav Cákoci, PhD., RNDr. Katarína Danielová, PhD., doc. RNDr. Daniel Guľák, PhD., doc. RNDr. František Križan, PhD., doc. RNDr. Eva Rajčáková, CSc., Mgr. Michala Sládeková Madajová, PhD., RNDr. Angelika Švecová, PhD., Mgr. Martin Šveda, PhD., prof. RNDr. Ladislav Tolmáči, PhD., RNDr. Mgr. Anna Tolmáči, PhD., Mgr. Gabriel Zubriczký, PhD. |     |                                                                    |     |     |       |
| <b>Last change:</b> 15.05.2021                                                                                                                                                                                                                                                                                                                                                 |     |                                                                    |     |     |       |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                            |     |                                                                    |     |     |       |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                            |       |                                                        |      |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                          |       |                                                        |      |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                |       |                                                        |      |     |      |
| <b>Course ID:</b><br>PriF.KIHG/N-XXXX-012/21                                                                                                                                                                                                                                                                                                                                                               |       | <b>Course title:</b><br>Practical Geology for Everyone |      |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                         |       |                                                        |      |     |      |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                |       |                                                        |      |     |      |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                                                                                                                                                                                                                    |       |                                                        |      |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                          |       |                                                        |      |     |      |
| <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: 35                                                                                                                                                                                                                                                                                                                                   |       |                                                        |      |     |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                          | B     | C                                                      | D    | E   | FX   |
| 65,71                                                                                                                                                                                                                                                                                                                                                                                                      | 11,43 | 8,57                                                   | 5,71 | 0,0 | 8,57 |
| <b>Lecturers:</b> doc. RNDr. Renáta Fláková, PhD., doc. RNDr. Renáta Adamcová, PhD., prof. RNDr. Roman Pašteka, PhD., prof. RNDr. Martin Bednarik, PhD., doc. RNDr. Dávid Krčmář, PhD., doc. RNDr. Andrej Mojzeš, PhD., RNDr. Ivana Ondřejková, PhD., doc. Mgr. Vladimír Greif, PhD., Mgr. Rudolf Tornyai, PhD., RNDr. Tatiana Durmeková, PhD., Mgr. Martin Zatlakovič, PhD., doc. RNDr. Milan Seman, CSc. |       |                                                        |      |     |      |
| <b>Last change:</b> 18.09.2022                                                                                                                                                                                                                                                                                                                                                                             |       |                                                        |      |     |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                        |       |                                                        |      |     |      |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                        |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                        |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                        |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-682/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Course title:</b><br>Preparation Tasks for Programming Competitions |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                        |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                        |
| <b>Recommended semester:</b> 4., 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                        |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                        |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                        |
| <b>Course requirements:</b><br>The student can get 30% points for active participation in seminars, 20% for the design and preparation of methodological procedures for solving tasks and 50% for the design, formulation and solution of their own tasks.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                        |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- identifies and examines tasks from various IT competitions</li> <li>- according to the text of the task can specify the IT knowledge needed to solve it</li> <li>- is able to design their own assignments for the IT competition, while being able to take into account the age and knowledge of students that are necessary to solve it</li> <li>- processes the proposed tasks into a suitable form, e.g. website, forms</li> <li>- verifies the tasks in a small group of students and processes the results of their observations using qualitative research methods</li> </ul>                                                                                                        |                                                                        |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Overview of Slovak and foreign IT competitions</li> <li>- Classification of tasks according to the age of students</li> <li>- Tasks of the iBobor competition</li> <li>- Creating assignments that contain the same IT concepts but have different motivations</li> <li>- Characteristics of the task according to the age of students</li> <li>- Design of interactive tasks for competitions</li> <li>- Preparation of graded sequences of tasks on various IT topics</li> <li>- Designing websites, forms or other systems in which students can solve tasks</li> <li>- Design and implementation of qualitative research with prepared tasks</li> <li>- Evaluation and presentation of research</li> </ul> |                                                                        |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                        |

|                                                                         |     |     |     |     |     |
|-------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| <b>Languages necessary to complete the course:</b><br>Slovak            |     |     |     |     |     |
| <b>Notes:</b>                                                           |     |     |     |     |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 1 |     |     |     |     |     |
| A                                                                       | B   | C   | D   | E   | FX  |
| 100,0                                                                   | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD.                |     |     |     |     |     |
| <b>Last change:</b> 23.06.2022                                          |     |     |     |     |     |
| <b>Approved by:</b>                                                     |     |     |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                             |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                             |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                             |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-681/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Preparation and Publication of Pedagogical Research |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                      |                                                                             |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                             |
| <b>Recommended semester:</b> 4., 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                             |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                             |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                             |
| <b>Course requirements:</b><br>Working on a project from the researcher's point of view<br>processing and presentation of a publishable article (100%)<br>Ongoing evaluation:<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 0/100                                                                                                                                                                                                                                               |                                                                             |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- is able to design research from the scientific or professional field of informatics according to his interest (formulate the goal, choose the research methods, research sample and data processing methods)</li> <li>- processes its research in a form suitable for publication</li> <li>- write the article to an appropriate extent</li> <li>- present the processed results of their own scientific work to a suitable professional audience</li> </ul> |                                                                             |
| <b>Class syllabus:</b><br>Solving a partial problem of a research problem.<br>Involvement of students in scientific work under the guidance of pedagogical and scientific staff.<br>Content, scope and processing of research scientific work into an article.<br>Utilize and process literature and web resources.<br>Public presentation of achieved results.                                                                                                                                                                                 |                                                                             |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment<br>various electronic, magazine and book materials that relate to the issues addressed                                                                                                                                                                                                                                                                                                                                         |                                                                             |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                             |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                             |

|                                                                         |     |     |     |     |     |
|-------------------------------------------------------------------------|-----|-----|-----|-----|-----|
| <b>Past grade distribution</b>                                          |     |     |     |     |     |
| Total number of evaluated students: 0                                   |     |     |     |     |     |
| A                                                                       | B   | C   | D   | E   | FX  |
| 0,0                                                                     | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Lucia Budinská, PhD., Mgr. Karolína Miková, PhD. |     |     |     |     |     |
| <b>Last change:</b> 21.06.2022                                          |     |     |     |     |     |
| <b>Approved by:</b>                                                     |     |     |     |     |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                         |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                         |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                         |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-140/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Programming (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<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> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                         |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                         |
| <b>Course requirements:</b><br>Continuous evaluation: the course is scored, the maximum number of points for the course is 150. The student gains continuous (weekly) points for solved problem tasks (70 pts), two interim tests (20 pts total), solved project (20 pts), active work during the semester (10 pts), and for solving assigned programming problems on the exam (30 pts). The student must earn a minimum of 58 points during the semester.<br>Detailed grading requirements will be specified by the instructor at the beginning of the semester.<br>Exam: In the form of solving a set of programming problems at the computer.<br>A 92%, B 84%, C 76%, D 68%, E 60%.<br>Scale of assessment (preliminary/final): 70/30 The results of problems solved and active participation in seminars are counted towards the final maximum of 60 points a student can earn during the semester. An additional 10 points can be earned for completing a more complex research-oriented project (within a specified time, essentially before the final exam). The remaining 30 points is the maximum possible score for solving a set of problems on the exam. The time for solving it is usually 120 minutes, directly behind the computer. |                                         |
| <b>Learning outcomes:</b><br>Develop a systematic understanding of the basics of programming in a programming language appropriate to the state of knowledge. Develop understanding of basic programming concepts and practices that is characterized by the ability to: <ul style="list-style-type: none"> <li>· program the solution of a given problem, explain the function of the individual elements in it at the level of commands, control structures and the whole. Explain the strategy (algorithm) of the learner's solution, debug the solution, know how to modify it according to the requirements,</li> <li>· analyse the program code (created by themselves or by someone else), verify its behaviour, recognise the basic concepts and procedures in it (also comparing it with other programming environments that students have already encountered in primary and secondary school, including programmable robotic building blocks and toys),</li> <li>· explore a programming solution (created by someone else) using the decomposition method, to verify its behaviour, in various cases,</li> <li>· compare and explain the differences in various solutions of the same or similar problem.</li> </ul>                   |                                         |
| <b>Class syllabus:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                         |



the environment and options for direct control, the executor and its settings, the use and modification of settings,  
 elements of the programming language, command with no input, command with one or more inputs, groups of commands and their execution and reexecution,  
 creation of a user's command, its definition, use and modification, use of randomness, generation of random values and their use with various constraints,  
 creating and using an expression as an input to a command,  
 other control structures,  
 conditions and visualizing their changing values, use of conditions in computation,  
 working with multiple sprites, cooperation and communication between multiple sprites, programmed animations,  
 requested input and working with input value; variable and working with it,  
 creating and using composite data, working with a list, data visualisation

#### **Recommended literature:**

the lecturer's own electronic study materials published on the course website or in the Moodle system

Vickers, V.: How to Think Like a Programmer. Course Technology, 2008, 611 p.

Vaniček, J., Nagyová, I., Tomcsányiová, M.: Programování ve Scratch pro 2. stupeň základní školy. University of South Bohemia in České Budějovice, 2020.

Černochová, M., Vaňková, P., Štípek, J.: Programování ve Scratch pro pokročilé – projekty pro 2. stupeň základní školy. University of South Bohemia in České Budějovice, 2020. · Blaho, A., Salanci, L., Šimandl, V.: Programování v jazyce Python pro střední školy. University of South Bohemia in České Budějovice, 2020. · Guniš, J., Šnajder, L.: Programovanie v Pythone 1. Pavol Jozef Šafárik University in Košice, 2021, 170 p.

#### **Languages necessary to complete the course:**

Slovak, for the study of some materials secondary also English

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 79

| A     | B     | C     | D    | E    | FX    |
|-------|-------|-------|------|------|-------|
| 35,44 | 17,72 | 15,19 | 5,06 | 8,86 | 17,72 |

**Lecturers:** prof. RNDr. Ivan Kalaš, PhD.

**Last change:** 23.06.2022

**Approved by:**

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                         |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                         |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-141/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Course title:</b><br>Programming (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<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> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                         |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-140/22 - Programming (1) or FMFI.KDMFI/1-UIN-140/15 - Programming (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                         |
| <b>Course requirements:</b><br>Continuous assessment: assessment of homework(5%), short tests(40%), a project (10%) and one final test (15%)<br>Examination: practical programming examination<br>Indicative grading scale: A 88%, B 81%, C 74%, D 67%, E 60%<br>Scale of assessment (preliminary/final): 70/30                                                                                                                                                                                                                                                                                                                                                                                                                           |                                         |
| <b>Learning outcomes:</b><br>After completing the course, students will have mastered the basics of programming in an object-oriented programming language, will understand the syntax and semantics of simple program constructs, will be able to use the basic constructs and basic data structures of the programming language and also basic algorithms in creating programs to solve simple problems. They will be able to analyse programming code and detect errors in it.                                                                                                                                                                                                                                                         |                                         |
| <b>Class syllabus:</b><br>Brief outline of the course:<br>programming language environment, basic concepts and programming constructs (variable, command, program, assignment, conditional statements, loops, input, output)<br>basic data types and data structures of the language (integer type, decimal type, logical type, string, ...)<br>basic work with graphics, generation and use of random values<br>functions without return value and with return value<br>basic structured types and files<br>events in the graphical area<br>basic algorithms with numbers, on structured types, with graphical commands, for user interaction, etc.<br>basics of object-oriented programming (class, object, encapsulation, inheritance) |                                         |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                         |

the teacher's own electronic study materials published on the course website or in the Moodle system

Blaho, A., Salanci, L., Šimandl, V.: Programování v jazyce Python pro střední školy. Jihočeská univerzita v Českých Budějovicích, 2020.

Guniš, J., Šnajder, L.: Programovanie v Pythone 1. Univerzita Pavla Jozefa Šafárika v Košiciach, 2021, 170 p.

Kučera, P.: Programujeme v Pythone, e-kniha, 2017

**Languages necessary to complete the course:**

Slovak

**Notes:**

**Past grade distribution**

Total number of evaluated students: 47

| A     | B     | C     | D    | E   | FX   |
|-------|-------|-------|------|-----|------|
| 48,94 | 17,02 | 17,02 | 8,51 | 0,0 | 8,51 |

**Lecturers:** doc. RNDr. Zuzana Kubincová, PhD.

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                |                                         |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                              |                                         |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                    |                                         |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-241/15                                                                                                                                                                                                                                                                                                                                                                   | <b>Course title:</b><br>Programming (3) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practicals / lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                       |                                         |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                                                    |                                         |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                |                                         |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                              |                                         |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-141/22 - Programming (2) or FMFI.KDMFI/1-UIN-141/15 - Programming (2)                                                                                                                                                                                                                                                                                                   |                                         |
| <b>Course requirements:</b><br>Continuous assessment: assessment of homework (5%), short tests (40%), a project (10%) and one final test (15%)<br>Examination: practical programming examination<br>Indicative grading scale: A 88%, B 81%, C 74%, D 67%, E 60%<br>Scale of assessment (preliminary/final): 70/30                                                                                              |                                         |
| <b>Learning outcomes:</b><br>After completing the course, students will be able to use more complex data types and program constructs of the object-oriented programming language and basic algorithms for working with them, they will better understand the principles of object-oriented programming, they will be able to program the solution of more complex problems and analyze more complex programs. |                                         |
| <b>Class syllabus:</b><br>- other data types and program constructs<br>- recursion<br>- polymorphism<br>- working with images and animation<br>- linked structures<br>- algorithms on more complex structures                                                                                                                                                                                                  |                                         |
| <b>Recommended literature:</b><br>• the teacher's own electronic study materials published on the course website or in the Moodle system<br>• Pecinovský, R.: Začínáme programovat v jazyku Python. Grada, 2020, S. 272<br>• Guniš, J., Šnajder, L.: Programovanie v Pythone 1. Univerzita Pavla Jozefa Šafárika v Košiciach, 2021, S. 170<br>• Kučera, P.: Programujeme v Pythone, e-kniha, 2017              |                                         |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                   |                                         |

|                                                     |       |       |      |      |      |
|-----------------------------------------------------|-------|-------|------|------|------|
| <b>Notes:</b>                                       |       |       |      |      |      |
| <b>Past grade distribution</b>                      |       |       |      |      |      |
| Total number of evaluated students: 47              |       |       |      |      |      |
| A                                                   | B     | C     | D    | E    | FX   |
| 44,68                                               | 17,02 | 14,89 | 6,38 | 8,51 | 8,51 |
| <b>Lecturers:</b> doc. RNDr. Zuzana Kubincová, PhD. |       |       |      |      |      |
| <b>Last change:</b> 22.06.2022                      |       |       |      |      |      |
| <b>Approved by:</b>                                 |       |       |      |      |      |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-327/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Course title:</b><br>Programming Etudes (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                |
| <b>Recommended semester:</b> 5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 50% points for the elaboration of tasks at the seminar, another 50% for the design, implementation and presentation of the project.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- can assess whether the programming environment is suitable for a given level of education</li> <li>- uses more advanced techniques of the programming environment for students at the 2nd level of elementary school</li> <li>- Designs and programs projects and small educational applications</li> <li>- when solving problems, he can choose the right programming technique and implement it</li> <li>- can decide whether the programming technique is suitable for the given level of education</li> </ul>                                                                                                                                                                           |                                                |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- programming techniques: mouse click on an object on the stage</li> <li>- data structure list and its use in the programming environment</li> <li>- programming techniques: the use of data list structure in solving tasks</li> <li>- programming techniques: moving the object using the keys</li> <li>- programming techniques enabling animations in the programming environment</li> <li>- programming techniques leading to an object-oriented approach</li> <li>- more advanced programming techniques leading to parallelism</li> <li>- project specification and design</li> <li>- project implementation, error tuning</li> <li>- project demonstration, evaluation and project discussion</li> </ul> |                                                |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                |

|                                                          |      |      |      |      |      |
|----------------------------------------------------------|------|------|------|------|------|
| <b>Notes:</b>                                            |      |      |      |      |      |
| <b>Past grade distribution</b>                           |      |      |      |      |      |
| Total number of evaluated students: 46                   |      |      |      |      |      |
| A                                                        | B    | C    | D    | E    | FX   |
| 78,26                                                    | 6,52 | 4,35 | 4,35 | 4,35 | 2,17 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD. |      |      |      |      |      |
| <b>Last change:</b> 20.06.2022                           |      |      |      |      |      |
| <b>Approved by:</b>                                      |      |      |      |      |      |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-325/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Programming Etudes (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                  |                                                |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |
| <b>Course requirements:</b><br>Continuous assessment: 60% elaboration of assignments at the seminar, homework, 40% final project.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 60/40                                                                                                                                                                                                                                                                                                       |                                                |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- designs and implements several graded programming projects from the teacher's practice.</li> <li>- can find errors in the source code, e.g. its stepping, checklists.</li> <li>- is able to discuss several solutions to the same programming problem.</li> <li>- is able to implement some solutions.</li> </ul>                                                                                                                                                        |                                                |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Programming techniques for solving problems using cycles, conditions and fields.</li> <li>- Creating graded projects to solve more complex tasks.</li> <li>- Use of recursion to implement different types of sorting, visualization.</li> <li>- Solving high school programming tasks from various competitions</li> <li>- project specification and design</li> <li>- project implementation, error tuning</li> <li>- project demonstration, evaluation and project discussion</li> </ul> |                                                |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |



|                                                                                         |      |      |      |     |      |
|-----------------------------------------------------------------------------------------|------|------|------|-----|------|
| <b>Past grade distribution</b>                                                          |      |      |      |     |      |
| Total number of evaluated students: 42                                                  |      |      |      |     |      |
| A                                                                                       | B    | C    | D    | E   | FX   |
| 78,57                                                                                   | 7,14 | 2,38 | 7,14 | 0,0 | 4,76 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD., PaedDr. Andrea Hrušecká, PhD. |      |      |      |     |      |
| <b>Last change:</b> 20.06.2022                                                          |      |      |      |     |      |
| <b>Approved by:</b>                                                                     |      |      |      |     |      |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                   |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-351/17                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Programming in JavaScript |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                              |                                                   |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                   |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                   |
| <b>Course requirements:</b><br>The student can get 50% points for studying and applying the features of the JavaScript programming language. He can get another 50% of points for programming the assigned tasks during the seminars.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                               |                                                   |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- knows the commands of JavaScript, a language that is suitable for creating applications that work in a web browser</li> <li>- Understands how to embed JavaScript code in an html page</li> <li>- recognizes and explains the function of individual elements that are part of the html code and whose actions are linked to JavaScript</li> <li>- is able to write and debug its problem solution in JavaScript language</li> </ul> |                                                   |
| <b>Class syllabus:</b><br>Course contents:<br>Basic structures of JavaScript: variables, Boolean expressions<br>JS and html collaboration<br>JS and functions<br>Design for repetition<br>Branching in JS<br>One-dimensional arrays, array rendering<br>Two-dimensional arrays, Life game<br>Mouse events - click<br>Mouse events - dragging<br>Special event customization and syntax for mobile devices<br>Working with images in JS                                                                                  |                                                   |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                   |

Tomcsányiová, M .: JavaScript: from Introduction to Games, internal material of the Department of Didactics of the IFI, FMFI Comenius University in Bratislava, 2021  
JavaScript website  
own electronic texts published on the website, resp. in the Moodle environment

**Languages necessary to complete the course:**

Slovak

**Notes:**

**Past grade distribution**

Total number of evaluated students: 25

| A    | B    | C   | D   | E   | FX  |
|------|------|-----|-----|-----|-----|
| 64,0 | 12,0 | 8,0 | 4,0 | 4,0 | 8,0 |

**Lecturers:** doc. PaedDr. Monika Tomcsányiová, PhD.

**Last change:** 23.06.2022

**Approved by:**

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                            |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                            |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                            |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-349/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Course title:</b><br>Programming of Application for WEB |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                            |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                            |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                            |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-355/22 - Introduction to Web Documents Formation or<br>FMFI.KDMFI/1-UIN-355/10 - Introduction to Web Documents Formation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                            |
| <b>Course requirements:</b><br>Continuous assessment: practical tasks (100%)<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                            |
| <b>Learning outcomes:</b><br>After completing the course, students will be able to create a simple web application on the server side with the possibility of personalized access to individual parts of the application. The data will be stored in a database.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                            |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Server-side web applications</li> <li>- Introduction to PHP</li> <li>- Basic constructions of language (1) - variables, constants, strings, operators, conditions, cycles</li> <li>- Basic language constructions (2) - working with date and time, fields, functions for working with fields and strings</li> <li>- Reuse code</li> <li>- Form processing, processing and treatment of inputs</li> <li>- SESSION, COOKIES</li> <li>- Introduction to working with a database</li> <li>- Basic queries to the database - SELECT, INSERT, UPDATE, DELETE</li> <li>- Linking PHP to a database</li> <li>- Working with multiple tables at once</li> </ul> |                                                            |
| <b>Recommended literature:</b><br>PHP and MySQL: Web Application Development / Luke Welling, Laura Thomson; Translation by Jan Kuklínek. Prague: SoftPress, 2005<br>We program PHP professionally / Jesus Castagnetto ... [et al.]; Translation by Ludvík Roubíček. Brno: Computer Press, 2004<br>Own electronic texts of the subject, published via the subject's website, resp. Moodle system.                                                                                                                                                                                                                                                                                                                        |                                                            |

|                                                                                  |      |       |       |      |      |
|----------------------------------------------------------------------------------|------|-------|-------|------|------|
| <b>Languages necessary to complete the course:</b><br>Slovak                     |      |       |       |      |      |
| <b>Notes:</b>                                                                    |      |       |       |      |      |
| <b>Past grade distribution</b><br>Total number of evaluated students: 19         |      |       |       |      |      |
| A                                                                                | B    | C     | D     | E    | FX   |
| 36,84                                                                            | 5,26 | 21,05 | 26,32 | 5,26 | 5,26 |
| <b>Lecturers:</b> PaedDr. Roman Hrušecký, PhD., doc. RNDr. Ľudmila Jašková, PhD. |      |       |       |      |      |
| <b>Last change:</b> 23.06.2022                                                   |      |       |       |      |      |
| <b>Approved by:</b>                                                              |      |       |       |      |      |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                   |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                   |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                   |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-250/00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Course title:</b><br>Propedeutics of Informatics Education (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                   |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                   |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                   |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UXX-134/22 - Theory of Teaching or FMFI.KDMFI/1-UXX-134/19 - Theory of Teaching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                   |
| <b>Course requirements:</b><br>active participation in seminars and at least 50% of the semester<br>Continuous assessment: active participation in seminars (50%) and homework (30%)<br>Final test (20%)<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 80/20                                                                                                                                                                                                                                                                                                                         |                                                                   |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- knows the content and scope of the subject of informatics determined by the State Educational Program for various types and levels of schools</li> <li>- will be able to design and evaluate curricula for the subject Informatics</li> <li>- is able to identify the basic steps in creating the educational content of the lesson</li> <li>- can interpret and evaluate available methodological materials</li> <li>- acquires basic pedagogical habits</li> </ul>                                                                                              |                                                                   |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- Computer science teacher</li> <li>- Informatics in other countries</li> <li>- Curriculum analysis using Brunner's concept</li> <li>- Phases of teaching in computer science teaching</li> <li>- Educational goals of the subject of informatics at the 2nd level of elementary school and high school</li> <li>- Educational goals of individual topics of informatics</li> <li>- School curricula and curricula</li> <li>- Project teaching</li> <li>- Work with methodical materials</li> <li>- Planning and implementation of evaluation in the subject of informatics</li> </ul> |                                                                   |
| <b>Recommended literature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                   |

|                                                                                                                                                                                                                                                                                                                                                                                                  |      |      |      |      |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|-----|
| own electronic texts published<br>From educational program to teaching lesson / Marvin Pasch ... [et al.]; translated by Milan Koldinský. Prague: Portal, 2005<br>Školní didaktika / Zdeněk Kalhous, Otto Obst ... [et al.]. Prague: Portal, 2002<br>Transformations of the school in the digital age / Ivan Kalaš and team. Bratislava: Slovenské pedagogické nakladateľstvo - Mladé letá, 2013 |      |      |      |      |     |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |     |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |      |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 175                                                                                                                                                                                                                                                                                                                        |      |      |      |      |     |
| A                                                                                                                                                                                                                                                                                                                                                                                                | B    | C    | D    | E    | FX  |
| 78,86                                                                                                                                                                                                                                                                                                                                                                                            | 6,29 | 6,86 | 3,43 | 0,57 | 4,0 |
| <b>Lecturers:</b> Mgr. Karolína Miková, PhD., Mgr. Jakub Krcho                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |     |
| <b>Last change:</b> 21.06.2022                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      |     |

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                   |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                   |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-251/00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Propedeutics of Informatics Education (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                   |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                   |
| <b>Prerequisites:</b> FMFI.KDMFI/1-UIN-250/00 - Propedeutics of Informatics Education (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                   |
| <b>Course requirements:</b><br>Interim evaluation: active participation in seminars (presentation of preparation (50%) and feedback (50%))<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                              |                                                                   |
| <b>Learning outcomes:</b><br>The student will have experience in using theoretical knowledge in creating preparations for the lesson.<br>He will be able to critically evaluate the design and implementation of the lesson and express his opinion in the discussion.<br>The student will have built some basic pedagogical habits.                                                                                                                                                                                                                        |                                                                   |
| <b>Class syllabus:</b><br>Course contents:<br>Students will create preparations for computer science lessons for the following topics:<br>Anti-virus and anti-spyware programs<br>Internet security and risks<br>Working with tables<br>Working with presentations<br>Working with graphics<br>Working with sound<br>Working with text<br>Working with a website<br>Encryption<br>Coding<br>Working with multimedia<br>Communication tools<br>Web search<br>In the form of a simulation, the lessons will test the preparations made and then discuss them. |                                                                   |



**Recommended literature:**

From educational program to teaching lesson / Marvin Pasch ... [et al.]; translated by Milan Koldinský. Prague: Portal, 2005

Informatics for secondary schools: učebnica / Ivan Kalaš ... [et al.]. Bratislava: Slovenské pedagogické nakladateľstvo, 2005

Transformations of the school in the digital age / Ivan Kalaš and team. Bratislava: Slovenské pedagogické nakladateľstvo - Mladé letá, 2013

Work with graphics: thematic notebook for the 1st year of grammar schools, for the fifth of eight-year grammar schools / Ľubomír Salanci. Bratislava: Slovenské pedagogické nakladateľstvo, 2000

own electronic texts published on the website, resp. in the Moodle environment

**Languages necessary to complete the course:**

Slovak

**Notes:****Past grade distribution**

Total number of evaluated students: 152

| A     | B    | C    | D    | E    | FX   |
|-------|------|------|------|------|------|
| 76,32 | 7,24 | 3,95 | 2,63 | 3,29 | 6,58 |

**Lecturers:** Mgr. Karolína Miková, PhD., Mgr. Jakub Krcho

**Last change:** 21.06.2022

**Approved by:**

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-----------------------------------------------------|-------|-------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                                     |       |       |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                                     |       |       |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                                     |       |       |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-038/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>Psychology for Teachers (1) |       |       |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |     |       |                                                     |       |       |      |
| <b>Number of credits:</b> 4                                                                                                                                                                                           |     |       |                                                     |       |       |      |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                       |     |       |                                                     |       |       |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                                     |       |       |      |
| <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: 75                                                                                                                                              |     |       |                                                     |       |       |      |
| A                                                                                                                                                                                                                     | ABS | B     | C                                                   | D     | E     | FX   |
| 10,67                                                                                                                                                                                                                 | 0,0 | 18,67 | 14,67                                               | 26,67 | 22,67 | 6,67 |
| <b>Lecturers:</b> RNDr. Jana Ciceková, PhD., PhDr. ThLic. Peter Ikhardt, PhD.                                                                                                                                         |     |       |                                                     |       |       |      |
| <b>Last change:</b> 16.09.2022                                                                                                                                                                                        |     |       |                                                     |       |       |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                                     |       |       |      |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                     |
| <b>Course ID:</b><br>FMFI-PriF.KDPP/1-<br>UXX-141/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Psychology for Teachers (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                     |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                     |
| <b>Recommended semester:</b> 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                     |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                     |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                     |
| <b>Antirequisites:</b> FMFI-PriF.KDPP/1-UXX-131/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                     |
| <b>Course requirements:</b><br>The course is completed by an exam, the evaluation ratio is 50% of the continuous evaluation + 50% of the final evaluation. Interim evaluation includes a midterm test (30% of evaluation) and a seminar paper (20% of evaluation). The final evaluation includes the final exam (50% of the evaluation). To successfully complete the course, it is necessary to obtain at least 60% of points.<br>The rating is given on a scale:<br>A (100-92%, excellent - excellent results),<br>B (91-84%, very good - above average standard),<br>C (83-76%, good - normal reliable work),<br>D (75-68%, satisfactory - acceptable results),<br>E (67-60%, sufficient - results meet minimum criteria),<br>Fx (59-0%, insufficient - additional work required)<br>Scale of assessment (preliminary/final): 50/50                                              |                                                     |
| <b>Learning outcomes:</b><br>The aim of the course Psychology for Teachers 1 is to make basic information about the general laws of human experience and behavior so that they can provide a platform for understanding the functioning of the human psyche and synthesize psychological knowledge, facts, theories, research approaches to a comprehensive view of the individual's psyche for creative professional application. in pedagogical practice. After completing the course, the student is able to orientate in the terminology of general and developmental psychology, can apply the knowledge of general and developmental psychology in the educational context, knows the laws of psychology, especially with regard to the needs of lower and upper secondary education, knows the laws of cognitive processes and their application in the educational process. |                                                     |
| <b>Class syllabus:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                     |

1. Introduction to psychology: psychology as a science, the subject of psychological research, approaches in psychology, the importance and use of psychology in the school environment and in the work of teachers.
2. Research and research methods in psychology: the importance of scientific knowledge, features of scientific work and methodology of psychological research.
3. Research and definition of mental processes. Mental and cognitive processes. Cognitive processes in the developmental and educational context in the school environment
  - a. perception, current research and its applications in the school environment. Interpretation and distortions in connection with the perception of the teacher.
  - b. Attention processes. Attention concentration, switching, current approaches. Multitasking and attention in the context of school performance and success.
  - c. Memory processes. Basic models of memory and their relation to education. Elaboration as a tool for effective remembering. Interference. Memory as an ability.
4. Representation and organization of knowledge, thinking: characteristics of thinking and its types. Terms: their connection and learning. Judgment and decision making. Fixed and growth-oriented mind settings. Problem solving: types of problems, problem solving strategies.
5. Intelligence: theory of intelligence, measurement of intelligence. Stability and development of intellectual abilities in relation to education. Intellectual talent.
6. Introduction to developmental psychology. Basic concepts, subject of research and methods of developmental psychology.
7. Mental development in general - determinants of development, character and types of developmental changes, characteristics of development from a psychological point of view, critical periods in development.
8. Selected developmental theories I.
9. Selected developmental theories II.
10. Periodization of development and characteristics of individual development periods I. with emphasis on the period of school age
11. Periodization of development and characteristics of individual development periods II. with an emphasis on adolescence
12. Basics of developmental psychopathology.

**Recommended literature:**

ATKINSON, R.C. et al. (2003) Psychology. Prague: Portal.  
 FONTANA, D. (1997) Psychology in school practice. Prague: Protal.  
 HORT, V. et al. (2008) Child and adolescent psychiatry. Prague: Portal  
 HOLEČEK, V. (2014) Psychology in teaching practice. Prague: City.  
 LANGMEIER, J.-KREJČÍŘOVÁ, D. (2006). Developmental Psychology. City.  
 STERNBERG, R., J. (2009). Cognitive psychology. Portal.  
 VÁGNEROVÁ, M. (2000) Developmental psychology. Childhood, adulthood, old age. Prague: Portal.  
 VESELSKÝ, M. (2001) Educational Psychology 1. Theory and practice. Bratislava: Comenius University.  
 VESELSKÝ, M. (2005) Educational Psychology 2. Theory and practice. Bratislava: Comenius University.

**Languages necessary to complete the course:**

Slovak and Czech language, English language (text comprehension)

**Notes:**

|                                                                               |       |       |       |       |      |
|-------------------------------------------------------------------------------|-------|-------|-------|-------|------|
| <b>Past grade distribution</b>                                                |       |       |       |       |      |
| Total number of evaluated students: 609                                       |       |       |       |       |      |
| A                                                                             | B     | C     | D     | E     | FX   |
| 20,03                                                                         | 15,44 | 23,81 | 19,05 | 17,41 | 4,27 |
| <b>Lecturers:</b> RNDr. Jana Ciceková, PhD., PhDr. ThLic. Peter Ikhardt, PhD. |       |       |       |       |      |
| <b>Last change:</b> 16.09.2022                                                |       |       |       |       |      |
| <b>Approved by:</b>                                                           |       |       |       |       |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-----------------------------------------------------|-------|-------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                                     |       |       |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                                     |       |       |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                                     |       |       |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-039/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>Psychology for Teachers (2) |       |       |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning |     |       |                                                     |       |       |      |
| <b>Number of credits:</b> 4                                                                                                                                                                                           |     |       |                                                     |       |       |      |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                       |     |       |                                                     |       |       |      |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                                     |       |       |      |
| <b>Prerequisites:</b> PriF.KDPP/N-bUXX-038/22 - Psychology for Teachers (1)                                                                                                                                           |     |       |                                                     |       |       |      |
| <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: 48                                                                                                                                              |     |       |                                                     |       |       |      |
| A                                                                                                                                                                                                                     | ABS | B     | C                                                   | D     | E     | FX   |
| 8,33                                                                                                                                                                                                                  | 0,0 | 20,83 | 31,25                                               | 14,58 | 16,67 | 8,33 |
| <b>Lecturers:</b> RNDr. Jana Ciceková, PhD., PhDr. ThLic. Peter Ikhardt, PhD.                                                                                                                                         |     |       |                                                     |       |       |      |
| <b>Last change:</b> 16.09.2022                                                                                                                                                                                        |     |       |                                                     |       |       |      |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                                     |       |       |      |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |
| <b>Course ID:</b><br>FMFI-PriF.KDDP/1-<br>UXX-142/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Course title:</b><br>Psychology for Teachers (2) |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 2 <b>per level/semester:</b> 28 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                     |
| <b>Number of credits:</b> 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                     |
| <b>Recommended semester:</b> 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                     |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                     |
| <b>Prerequisites:</b> FMFI-PriF.KDPP/1-UXX-141/22 - Psychology for Teachers (1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                     |
| <b>Antirequisites:</b> FMFI-PriF.KDPP/1-UXX-135/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                     |
| <b>Course requirements:</b><br>The course is completed by an exam, the evaluation ratio is 50% of the continuous evaluation + 50% of the final evaluation.<br>Continuous assessment includes active participation in seminars (at least 80% of the teaching part), presentation of the selected topic (20%) and elaboration of an essay (30%). Completion of these assignments is a condition of admission to the final exam.<br>The final evaluation includes the final exam (50% of the evaluation).<br>To successfully complete the course, it is necessary to obtain at least 60% of points.<br>The rating is given on a scale:<br>A (100-92%, excellent - excellent results),<br>B (91-84%, very good - above average standard),<br>C (83-76%, good - normal reliable work),<br>D (75-68%, satisfactory - acceptable results),<br>E (68-60%, sufficient - results meet minimum criteria),<br>Fx (59-0%, insufficient - additional work required)<br>Scale of assessment (preliminary/final): 50/50            |                                                     |
| <b>Learning outcomes:</b><br>The aim of the course Psychology for Teachers 2 is to make available the knowledge of personality psychology and educational psychology so that they can form the basis for understanding the functioning of the human psyche and synthesize psychological knowledge and theories into a comprehensive view of the individual's psyche for creative professional application in pedagogical practice. The aim of the course is also to increase the sensitivity of students to interindividual diversity in the school environment, to develop their psychological literacy and ability to apply current knowledge of theoretical and applied psychological disciplines in educational practice. After completing the course, the student is able to orientate in the terminology of personality psychology and educational psychology and can use the knowledge from these disciplines in designing an educational unit, knows the psychological context of the educational process. |                                                     |

**Class syllabus:**

1. Personality psychology and interindividual differences. Understanding personality in psychology. Application of personality psychology in pedagogical practice.
2. Biological and social bases of personality. Personality structure - temperament, character, abilities, motivation.
3. Personality typologies and their importance in educational practice. Personality of the teacher.
4. Psychology of learning - types, laws and conditions of learning. Selected approaches and theories of learning.
5. Psychological issues of motivation in the field of education. Resources and factors influencing motivation. Types of motivation. Selected theories of motivation. Performance motivation, goals and self-regulation.
6. Creativity in education - conditions and models of creative learning. Increasing creativity in students.
7. Pupils' performance in the educational process. School success vs. failure, failure of students. Psychological testing of students. Test and pre-test conditions. Evaluation and self-evaluation.
8. Psychosocial climate and class / school atmosphere as a factor of optimal education. Classroom communication. Class engagement and teacher influence. School classroom management and administration.
9. School class as a social group, the position of the individual - the student in it.
10. Learning disabilities. Pupils' problems in survival and behavior. Emotionality, self-image and aggression in the school environment. Psychological aspects of school inclusion. The role of the school psychologist and his help to the school.
11. Positive psychology in the school environment. Empathy and prosocial behavior in the classroom. Emotions in education and their importance. Active participation, interest, commitment, curiosity.
12. Personality in difficult life situations. Stress management. Load resistance. Mental health and psychohygiene at school. Prevention of bullying, mobbing and burnout.

**Recommended literature:**

ATKINSON, R.C. et al. (2003) Psychology. Prague: Portal.  
ČÁP, P. & MAREŠ, J. (2001) Psychology for Teachers. Prague: Portal.  
FONTANA, D. (1997) Psychology in school practice. Prague: Protal.  
HOLEČEK, V. (2014) Psychology in teaching practice. Prague: City.  
VÁGNEROVÁ, M. (2005). School counseling psychology for teachers. Prague: Karolinum  
VÁGNEROVÁ, M. (2010). Personality psychology. Prague: Karolinum  
VENDEL, S. (2007). Educational psychology. Bratislava: Epos  
VESELSKÝ, M. (2001) Educational Psychology 1. Theory and practice. Bratislava: Comenius University.  
VESELSKÝ, M. (2005) Educational Psychology 2. Theory and practice. Bratislava: Comenius University.

**Languages necessary to complete the course:**

Slovak and Czech language, English language (text comprehension)

**Notes:****Past grade distribution**

Total number of evaluated students: 456

| A     | B     | C     | D     | E    | FX   |
|-------|-------|-------|-------|------|------|
| 27,41 | 19,52 | 20,39 | 20,18 | 9,21 | 3,29 |



|                                                                               |
|-------------------------------------------------------------------------------|
| <b>Lecturers:</b> RNDr. Jana Ciceková, PhD., PhDr. ThLic. Peter Ikhardt, PhD. |
| <b>Last change:</b> 16.09.2022                                                |
| <b>Approved by:</b>                                                           |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                         |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                         |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                         |     |     |     |
| <b>Course ID:</b><br>PriF.KJCh/N-bCJD-045/22                                                                                                                                                       |     | <b>Course title:</b><br>Radiation and life for teachers |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                         |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                         |     |     |     |
| <b>Recommended semester:</b> 3.                                                                                                                                                                    |     |                                                         |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                         |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                       | D   | E   | FX  |
| 0,0                                                                                                                                                                                                | 0,0 | 0,0                                                     | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Eva Viglašová, PhD., Ing. Darina Tóthová, CSc., Mgr. Michaela Matulová, PhD., Mgr. Silvia Vyhnáleková                                                                 |     |                                                         |     |     |     |
| <b>Last change:</b> 24.10.2022                                                                                                                                                                     |     |                                                         |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                         |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------|------|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |       |                                  |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |       |                                  |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |       |                                  |      |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-006/22                                                                                                                                                       |       | <b>Course title:</b><br>Rhetoric |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |       |                                  |      |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |       |                                  |      |     |     |
| <b>Recommended semester:</b> 1., 2., 3., 4., 5., 6..                                                                                                                                               |       |                                  |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |       |                                  |      |     |     |
| <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: 14                                                                                                                           |       |                                  |      |     |     |
| A                                                                                                                                                                                                  | B     | C                                | D    | E   | FX  |
| 42,86                                                                                                                                                                                              | 42,86 | 7,14                             | 7,14 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Štefan Zolcer, PhD.                                                                                                                                                         |       |                                  |      |     |     |
| <b>Last change:</b> 23.09.2022                                                                                                                                                                     |       |                                  |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |       |                                  |      |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                         |     |                                       |     |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                         |     |                                       |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                       |     |                                       |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                             |     |                                       |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-110/22                                                                                                                                                             |     | <b>Course title:</b><br>River rafting |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> other<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 3d<br><b>Form of the course:</b> on-site learning          |     |                                       |     |     |     |
| <b>Number of credits:</b> 1                                                                                                                                                                             |     |                                       |     |     |     |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                                 |     |                                       |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                            |     |                                       |     |     |     |
| <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                                                                                                                                 |     |                                       |     |     |     |
| A                                                                                                                                                                                                       | B   | C                                     | D   | E   | FX  |
| 100,0                                                                                                                                                                                                   | 0,0 | 0,0                                   | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Šed'ová |     |                                       |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                          |     |                                       |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                     |     |                                       |     |     |     |

## COURSE DESCRIPTION

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                           |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                           |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                           |
| <b>Course ID:</b><br>FMFL.KDMFI/1-UIN-354/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Course title:</b><br>Robotic Kits as Pedagogical Tools |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                           |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                           |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                           |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                           |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                           |
| <b>Course requirements:</b><br>Evaluation during semester: active participation, work on project during lessons (100%)<br>Scale of assessment (preliminary/final): 100 / 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                           |
| <b>Learning outcomes:</b><br>The student: <ul style="list-style-type: none"> <li>- try out the implementation of activities for primary school students</li> <li>- get acquainted with several robotic toys</li> <li>- discuss the possible use of robotic toys in various subjects at school;</li> <li>- get acquainted with project teaching and constructionist form of teaching and will be able to apply the basic principles of these forms in educational activities with robotic toys</li> <li>- will independently design, solve and present robotic projects</li> </ul>                                                                                                                                  |                                                           |
| <b>Class syllabus:</b> <ul style="list-style-type: none"> <li>- simulation of an inexperienced teacher</li> <li>- acquaintance with new technology</li> <li>- analysis of the control tool</li> <li>- work with methodical materials</li> <li>- creative activities with a selected robotic toy</li> <li>- didactic view of robotic toys</li> <li>- presenting findings and learning feedback</li> </ul>                                                                                                                                                                                                                                                                                                           |                                                           |
| <b>Recommended literature:</b> <ul style="list-style-type: none"> <li>- Further education of primary and secondary school teachers in the subject of informatics: Didactics of robotic building blocks: 1.2 Education of unqualified informatics teachers at the 2nd level of primary school and at secondary school / Martina Kabátová, ... [et al.]. Bratislava: State Pedagogical Institute, 2010</li> <li>- Transformations of the school in the digital age / Ivan Kalaš a kolektív. Bratislava: Slovenské pedagogické nakladateľstvo - Mladé letá, 2013</li> <li>- Getting Started with LEGO Robotics: A Guide for K-12 Educators / Mark gura. International Society for Technology in Education.</li> </ul> |                                                           |

|                                                                           |      |      |     |     |      |
|---------------------------------------------------------------------------|------|------|-----|-----|------|
| <b>Languages necessary to complete the course:</b><br>Slovak, English     |      |      |     |     |      |
| <b>Notes:</b>                                                             |      |      |     |     |      |
| <b>Past grade distribution</b><br>Total number of evaluated students: 188 |      |      |     |     |      |
| A                                                                         | B    | C    | D   | E   | FX   |
| 93,62                                                                     | 3,19 | 1,06 | 0,0 | 0,0 | 2,13 |
| <b>Lecturers:</b> Mgr. Karolína Miková, PhD., Mgr. Jakub Krcho            |      |      |     |     |      |
| <b>Last change:</b> 22.06.2022                                            |      |      |     |     |      |
| <b>Approved by:</b>                                                       |      |      |     |     |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |                                                                             |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |                                                                             |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |                                                                             |     |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-042/22                                                                                                                                                                          |     | <b>Course title:</b><br>STEM Strategy in the Pre-service Teacher's Training |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning |     |                                                                             |     |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |     |                                                                             |     |     |     |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                       |     |                                                                             |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |                                                                             |     |     |     |
| <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: 4                                                                                                                                               |     |                                                                             |     |     |     |
| A                                                                                                                                                                                                                     | B   | C                                                                           | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                 | 0,0 | 0,0                                                                         | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Radoslav Halko, PhD., Mgr. Milica Križanová, PhD.                                                                                                                                        |     |                                                                             |     |     |     |
| <b>Last change:</b> 07.09.2022                                                                                                                                                                                        |     |                                                                             |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |                                                                             |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-------------------------------------------|------|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                           |      |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                           |      |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                           |      |     |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-026/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>School Management |      |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning |     |       |                                           |      |     |     |
| <b>Number of credits:</b> 3                                                                                                                                                                                           |     |       |                                           |      |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                       |     |       |                                           |      |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                           |      |     |     |
| <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: 49                                                                                                                                              |     |       |                                           |      |     |     |
| A                                                                                                                                                                                                                     | ABS | B     | C                                         | D    | E   | FX  |
| 81,63                                                                                                                                                                                                                 | 0,0 | 12,24 | 4,08                                      | 2,04 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. PaedDr. Zuzana Haláková, PhD.                                                                                                                                                            |     |       |                                           |      |     |     |
| <b>Last change:</b> 14.09.2022                                                                                                                                                                                        |     |       |                                           |      |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                           |      |     |     |



## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-331/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Course title:</b><br>School Management |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 2 <b>per level/semester:</b> 14 / 28<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                           |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                           |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |
| <b>Antirequisites:</b> FMFI-Prif.KDPP/1-UXX-331/15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                           |
| <b>Course requirements:</b><br>The condition for successful completion of the course is to obtain at least 60% of the maximum possible evaluation of the course.<br>The work during the semester on partial tasks from different areas and levels of school management will be evaluated:<br>- reading and presentation of recommended literature (10%)<br>- active participation in exercises (35%)<br>- attendance at lectures and feedback on lectures (20%)<br>- report+presentation in pairs (15%)<br>- final written exam (20%)<br>The rating is given on a scale:<br>A: 93-100%, excellent - excellent results,<br>B: 85-92%, very good - above average standard,<br>C: 76-84%, good - normal reliable work,<br>D: 68-75%, satisfactory - acceptable results,<br>E: 60-67%, sufficient - the results meet the minimum criteria,<br>Fx: 0-59%, insufficient - additional work required<br>Scale of assessment (preliminary/final): 80 / 20 |                                           |
| <b>Learning outcomes:</b><br>Knowledge of the school system in the Slovak Republic in comparison with successful education systems in other countries, understanding of the management system and organization of education in the Slovak Republic at all levels, orientation in school and labor legislation, pedagogical documents, electronic systems used in primary and secondary schools (eg Edupage). Ability to apply knowledge of other disciplines in the field of school management.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |
| <b>Class syllabus:</b><br>Basic terminology of school management. Education system in the Slovak Republic and education management system. School management models. Personality of a leading pedagogical employee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                           |

- legal and personal requirements, leadership styles. Hierarchy of education workers. Control activities in schools, apprenticeship. School and labor legislation (legal regulations governing the activities of primary and secondary schools - laws, decrees, work regulations, pedagogical-organizational instructions, pedagogical documentation), time management. Edupage. Teacher professional development. Class teacher.

**Recommended literature:**

HALÁKOVÁ, Z., NAGYOVÁ, S., NAGY, T. 2019. School management for students of science subjects with practical examples. Bratislava: UK.

OBDRŽÁLEK, Z. 2002. School and its management. Bratislava: UK.

OBDRŽÁLEK, Z., HORVÁTHOVÁ, K. et al. 2004. Organization and management of education. Terminological and interpretative dictionary. Bratislava: SPN.

EGER, L. 2006. School management. Pilsen: Fraus.

PISOŇOVÁ, M. 2012. Personality development of the school principal - starting points and determinants.

Current legal regulations governing the activities of primary and secondary schools (laws, decrees, internal regulations, pedagogical-organizational instructions).

Pedagogical documentation

WONG, H. K., WONG, R.T. The first days of school: How to be an effective teacher. Mountain View, CA: Harry K. Wong Publications, 2005.

LAU, W. Teaching Computing in Secondary Schools: A Practical Handbook. Routledge, 2017.

LEMOV, D. Teach like a champion 2.0: 62 techniques that put students on the path to college. John Wiley & Sons, 2015.

CANGELOSI, J. S. Classroom Management Strategies: How to Gain and Maintain Pupils' Cooperation in Teaching. Portal, 1996.

Current Internet resources and journal sources (Education Technology, School Management in Practice, Quality and more).

**Languages necessary to complete the course:**

Communication - Slovak  
Study of literature - Slovak, English

**Notes:**

**Past grade distribution**

Total number of evaluated students: 118

| A     | B     | C     | D    | E    | FX   |
|-------|-------|-------|------|------|------|
| 50,85 | 14,41 | 24,58 | 4,24 | 0,85 | 5,08 |

**Lecturers:** Mgr. Karolína Miková, PhD., PaedDr. Tünde Kiss, PhD.

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

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| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |                                                       |      |      |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                          |      |                                                       |      |      |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                       |      |      |     |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-332/22                                                                                                                                                                                                                                                                                                                                                                                                                               |      | <b>Course title:</b><br>Social Aspects of Informatics |      |      |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                |      |                                                       |      |      |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                       |      |      |     |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |                                                       |      |      |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                                                       |      |      |     |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                       |      |      |     |
| <b>Antirequisites:</b> FMFI.KDMFI/1-INF-175/00                                                                                                                                                                                                                                                                                                                                                                                                                             |      |                                                       |      |      |     |
| <b>Course requirements:</b><br>Continuous evaluation: two seminar works, presentation resp. third seminar work<br>In the case of three seminar papers, the evaluation of each thesis will be 1/3 points, in the case of 2 seminar papers and the presentation, the evaluation of the seminar paper will be 25% points and the presentation 50% points.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0 |      |                                                       |      |      |     |
| <b>Learning outcomes:</b><br>Students lead science as information technology changes society (in historical context)                                                                                                                                                                                                                                                                                                                                                       |      |                                                       |      |      |     |
| <b>Class syllabus:</b><br>New ICT technologies are evolving very fast. But they are constantly entering our daily lives. We note what changes, what positive, but also what risks ICT brings in various areas: education, health, arts, business and finance, industry and others. We will pay special attention to the issue of copyright and its infringement and cybercrime.<br>Also what risks they bring.                                                             |      |                                                       |      |      |     |
| <b>Recommended literature:</b><br>Abelson, Ledeen, Lewis, BlownTo Bits, Addison Wesley 2008, <a href="http://www.bitsbook.com">www.bitsbook.com</a><br>information on the subject's website                                                                                                                                                                                                                                                                                |      |                                                       |      |      |     |
| <b>Languages necessary to complete the course:</b><br>Slovak, English                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                       |      |      |     |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |                                                       |      |      |     |
| <b>Past grade distribution</b><br>Total number of evaluated students: 131                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                                       |      |      |     |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B    | C                                                     | D    | E    | FX  |
| 96,18                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2,29 | 0,0                                                   | 0,76 | 0,76 | 0,0 |

|                                              |
|----------------------------------------------|
| <b>Lecturers:</b> RNDr. Michal Winczer, PhD. |
| <b>Last change:</b> 22.06.2022               |
| <b>Approved by:</b>                          |

## COURSE DESCRIPTION

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                               |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UIN-673/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Course title:</b><br>Software in Education |
| <b>Educational activities:</b><br><b>Type of activities:</b> course<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                               |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                               |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                               |
| <b>Course requirements:</b><br>Continuous assessment: The student can get 40% points for a review of software for teaching computer science. He will get another 60% of points for the design, specification and implementation of his own educational software.<br>Indicative assessment scale: A 90%, B 80%, C 70%, D 60%, E 50%<br>Scale of assessment (preliminary/final): 100/0                                                                                                                                                                                                                                                                                                                                                        |                                               |
| <b>Learning outcomes:</b><br>The student is able to assess the suitability of specific educational software for teaching computer science at elementary schools, high schools, respectively. VŠ. He is able to classify educational software. Can give examples of software that is suitable for education for a specific age group of students. Review educational software. Can apply the findings to the design of educational software. Creates a software proposal for teaching computer science for elementary or high school students.                                                                                                                                                                                               |                                               |
| <b>Class syllabus:</b><br>The importance of digital technologies in the cognitive process, in teaching and learning.<br>Definition and classification of software used in education.<br>Criteria for evaluating educational software from different perspectives.<br>Educational applications for teaching computer science to primary and secondary school students.<br>Information systems used for education.<br>Software for education and developmental stages of knowledge.<br>GUI design for software to be used in education.<br>Action research - students and teachers as co-authors of software design for education.<br>Principles of creating software for education.<br>Educational software for students with special needs. |                                               |
| <b>Recommended literature:</b><br>own electronic texts published on the website, resp. in the Moodle environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |
| <b>Languages necessary to complete the course:</b><br>Slovak                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |

|                                                          |     |     |     |     |     |
|----------------------------------------------------------|-----|-----|-----|-----|-----|
| <b>Notes:</b>                                            |     |     |     |     |     |
| <b>Past grade distribution</b>                           |     |     |     |     |     |
| Total number of evaluated students: 0                    |     |     |     |     |     |
| A                                                        | B   | C   | D   | E   | FX  |
| 0,0                                                      | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. PaedDr. Monika Tomcsányiová, PhD. |     |     |     |     |     |
| <b>Last change:</b> 20.06.2022                           |     |     |     |     |     |
| <b>Approved by:</b>                                      |     |     |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                  |     |                                                            |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                |     |                                                            |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                      |     |                                                            |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bUXX-206/22                                                                                                                                                                                      |     | <b>Course title:</b><br>Summer Physical-Education Training |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> training session<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning                        |     |                                                            |     |     |     |
| <b>Number of credits:</b> 1                                                                                                                                                                                                      |     |                                                            |     |     |     |
| <b>Recommended semester:</b> 2., 4.                                                                                                                                                                                              |     |                                                            |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                                     |     |                                                            |     |     |     |
| <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                                                                                                                                                                                                                                | B   | C                                                          | D   | E   | FX  |
| 100,0                                                                                                                                                                                                                            | 0,0 | 0,0                                                        | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., PaedDr. Vladimír Pajkoš, Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Šed'ová |     |                                                            |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                   |     |                                                            |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                              |     |                                                            |     |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                           |     |                                                            |     |     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                           |     |                                                            |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                         |     |                                                            |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                               |     |                                                            |     |     |     |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-108/22                                                                                                                                                               |     | <b>Course title:</b><br>Summer Physical-Education Training |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> training session<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning |     |                                                            |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                               |     |                                                            |     |     |     |
| <b>Recommended semester:</b> 2., 4.                                                                                                                                                                       |     |                                                            |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                              |     |                                                            |     |     |     |
| <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: 2                                                                                                                                   |     |                                                            |     |     |     |
| A                                                                                                                                                                                                         | B   | C                                                          | D   | E   | FX  |
| 100,0                                                                                                                                                                                                     | 0,0 | 0,0                                                        | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Šed'ová   |     |                                                            |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                            |     |                                                            |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                       |     |                                                            |     |     |     |



## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                    |     |       |                                                 |     |      |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-------------------------------------------------|-----|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                    |     |       |                                                 |     |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                  |     |       |                                                 |     |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                        |     |       |                                                 |     |      |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-023/22                                                                                                                                                                                                                                                                                                                                       |     |       | <b>Course title:</b><br>Teaching Practice 1 (A) |     |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practice<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                  |     |       |                                                 |     |      |      |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                        |     |       |                                                 |     |      |      |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                    |     |       |                                                 |     |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                       |     |       |                                                 |     |      |      |
| <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   |
| 63,46                                                                                                                                                                                                                                                                                                                                                                              | 0,0 | 21,15 | 11,54                                           | 0,0 | 1,92 | 1,92 |
| <b>Lecturers:</b> doc. RNDr. Štefan Karolčík, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., Mgr. Milica Križanová, PhD., PaedDr. Anna Drozdíková, PhD., doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs, RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD. |     |       |                                                 |     |      |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                                     |     |       |                                                 |     |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                |     |       |                                                 |     |      |      |

## COURSE DESCRIPTION

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-------------------------------------------------|------|------|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                           |     |       |                                                 |      |      |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                         |     |       |                                                 |      |      |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                               |     |       |                                                 |      |      |      |
| <b>Course ID:</b><br>PriF.KDPP/N-bUXX-024/22                                                                                                                                                                                                                                                                                                                                                                                              |     |       | <b>Course title:</b><br>Teaching Practice 1 (B) |      |      |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> practice<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                         |     |       |                                                 |      |      |      |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                                                                               |     |       |                                                 |      |      |      |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                           |     |       |                                                 |      |      |      |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                              |     |       |                                                 |      |      |      |
| <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: 63                                                                                                                                                                                                                                                                                                                                                                  |     |       |                                                 |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                         | ABS | B     | C                                               | D    | E    | FX   |
| 36,51                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0,0 | 31,75 | 15,87                                           | 3,17 | 7,94 | 4,76 |
| <b>Lecturers:</b> doc. RNDr. Štefan Karolčík, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. PaedDr. Zuzana Haláková, PhD., Mgr. Milica Križanová, PhD., PaedDr. Anna Drozdíková, PhD., doc. PaedDr. Elena Čipková, PhD., PhDr. Michael Fuchs, RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD., M. A. Linda Steyne, PhD., Mgr. Monika Šajánková, PhD. |     |       |                                                 |      |      |      |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                                                                                            |     |       |                                                 |      |      |      |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |     |       |                                                 |      |      |      |

## COURSE DESCRIPTION

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Course ID:</b><br>FMFLKDMFI+KAG/1-<br>UXX-851/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Teaching Practice A (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practice<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                 |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| <b>Course requirements:</b><br>Course evaluation is conditional on: <ul style="list-style-type: none"> <li>• completing observations (lessons) in the scope of an hour-long training teacher,</li> <li>• active participation of the student in extracurricular and extracurricular activities of a practicing teacher,</li> <li>• evaluation of the student by the training teacher,</li> <li>• evaluation of the pedagogical diary, which the student submits to the head of the pedagogical practice within the set deadline.</li> </ul> In total, a student can get 42 points for pedagogical practice.<br>The evaluation of the subject is graded in percentage as follows: A (100-91%); B (90-81%); C (80-71%); D (70-61%); E (60-50%). At least 38 points must be obtained to obtain an A rating, at least 34 points to obtain a B rating, at least 30 points to obtain a C rating, at least 26 points to obtain a D rating and at least 21 points to obtain an E rating. Credits will not be awarded to a student who obtains less than 21 points out of the total number of points.<br>For non-compliance with the set deadlines and instructions of the head of the pedagogical practice, the student may be sanctioned by lowering the evaluation, or by not granting credits for the pedagogical practice. |                                                 |
| <b>Learning outcomes:</b><br>By completing the course, the student: <ul style="list-style-type: none"> <li>• deepen knowledge in the field of generally binding legal regulations related to the work of teachers, pedagogical and other documentation, conceptual and strategic documents of the school,</li> <li>• develop the professional competencies necessary for independent planning, design, management and organization of the educational process in the relevant subject on the basis of valid curricular documents, while adapting educational programs for specific groups of students,</li> <li>• develop professional competencies associated with didactic, pedagogical, psychological analysis of individual parts of the lesson,</li> <li>• develop the ability to apply pedagogical-psychological and professional-didactic knowledge in the educational process,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |

- develop the ability to evaluate diverse pedagogical situations and processes,
- deepen knowledge about the differences in the development of individuals resulting from their health, social disadvantages, talents or talents so that they can effectively cooperate with special pedagogues, psychologists and other professionals in the implementation of the educational process in the conditions of inclusive education and follow their professional recommendations and conclusions
- develop skills in working with teaching aids,
- acquire competencies associated with the creation of a pedagogical portfolio,
- develop competencies of self-assessment and further professional development,
- develop the ability to assess the suitability of the chosen means of education,
- develop communication skills, the ability to express and accept constructive criticism and praise.

#### **Class syllabus:**

Getting acquainted with the conditions of implementation of pedagogical practice.

Familiarization with pedagogical documentation, conceptual and strategic documents of the training school.

Participation in teaching within the scope of the training teacher, extra-class and extracurricular activities.

Creation of observation records from the teaching teacher 's lessons.

Creation of lesson analyzes.

Creation of written preparations for lessons.

Creation of a pedagogical diary and its submission to the head of pedagogical practice.

#### **Recommended literature:**

#### **Languages necessary to complete the course:**

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 18

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

**Lecturers:** RNDr. Michal Winczer, PhD., Mgr. Michaela Vargová, PhD., RNDr. Martina Bátorová, PhD., PaedDr. Peter Horváth, PhD.

**Last change:** 01.08.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Course ID:</b><br>FMFLKDMFI+KAG/1-<br>UXX-852/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Teaching Practice B (1) |
| <b>Educational activities:</b><br><b>Type of activities:</b> practice<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Number of credits:</b> 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>Educational level:</b> I.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                 |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| <b>Course requirements:</b><br>Course evaluation is conditional on: <ul style="list-style-type: none"> <li>• completing observations (lessons) in the scope of an hour-long training teacher,</li> <li>• active participation of the student in extracurricular and extracurricular activities of a practicing teacher,</li> <li>• evaluation of the student by the training teacher,</li> <li>• evaluation of the pedagogical diary, which the student submits to the head of the pedagogical practice within the set deadline.</li> </ul> In total, a student can get 42 points for pedagogical practice.<br>The evaluation of the subject is graded in percentage as follows: A (100-91%); B (90-81%); C (80-71%); D (70-61%); E (60-50%). At least 38 points must be obtained to obtain an A rating, at least 34 points to obtain a B rating, at least 30 points to obtain a C rating, at least 26 points to obtain a D rating and at least 21 points to obtain an E rating. Credits will not be awarded to a student who obtains less than 21 points out of the total number of points.<br>For non-compliance with the set deadlines and instructions of the head of the pedagogical practice, the student may be sanctioned by lowering the evaluation, or by not granting credits for the pedagogical practice. |                                                 |
| <b>Learning outcomes:</b><br>By completing the course, the student: <ul style="list-style-type: none"> <li>• deepen knowledge in the field of generally binding legal regulations related to the work of teachers, pedagogical and other documentation, conceptual and strategic documents of the school,</li> <li>• develop the professional competencies necessary for independent planning, design, management and organization of the educational process in the relevant subject on the basis of valid curricular documents, while adapting educational programs for specific groups of students,</li> <li>• develop professional competencies associated with didactic, pedagogical, psychological analysis of individual parts of the lesson,</li> <li>• develop the ability to apply pedagogical-psychological and professional-didactic knowledge in the educational process,</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |

- develop the ability to evaluate diverse pedagogical situations and processes,
- deepen knowledge about the differences in the development of individuals resulting from their health, social disadvantages, talents or talents so that they can effectively cooperate with special pedagogues, psychologists and other professionals in the implementation of the educational process in the conditions of inclusive education and follow their professional recommendations and conclusions
- develop skills in working with teaching aids,
- acquire competencies associated with the creation of a pedagogical portfolio,
- develop competencies of self-assessment and further professional development,
- develop the ability to assess the suitability of the chosen means of education,
- develop communication skills, the ability to express and accept constructive criticism and praise.

#### **Class syllabus:**

Getting acquainted with the conditions of implementation of pedagogical practice.

Familiarization with pedagogical documentation, conceptual and strategic documents of the training school.

Participation in teaching within the scope of the training teacher, extra-class and extracurricular activities.

Creation of observation records from the teaching teacher 's lessons.

Creation of lesson analyzes.

Creation of written preparations for lessons.

Creation of a pedagogical diary and its submission to the head of pedagogical practice.

#### **Recommended literature:**

All valid textbooks for primary and secondary schools

Innovated SEP for the 2nd grade of elementary school

An innovated SEP for grammar schools with a four-year and five-year educational program

Target requirements for knowledge and skills of high school graduates in biology

ŠkVP training school

Internal rules of the school

Gnoth, M., Ušáková, Fulková, E., Likavský, P., Turanová, L., Čipková, E., Tóthová, A., Grančičová, A. 2003. Pedagogical practice for students of teacher combinations at the Faculty of Science, Comenius University. Bratislava: Comenius University Bratislava, 2003. 140 p.

Kosová, B., Tomengová, A. 2015. Professional practical training of future teachers. Banská Bystrica: Belianum, 2015. 225 p.

DOUŠKOVÁ, K., LUPTÁKOVÁ-VANČÍKOVÁ, K. 2009. Pedagogical practice in teacher training. Banská Bystrica: Matej Bel University, 2009. FULKOVÁ, E., GNOTH, M. 2004.

Pedagogical practice. Nitra: Slovak University of Agriculture, 2004. GAVORA, P. 1997. ABC observations of teaching. Prešov: Metodicko-pedagogické centrum, 1997. KONTÍROVÁ, S. 2011. Pedagogical practice of students of academic subjects. Košice: Pavel Jozef Šafárik University, 2011.

FULKOVÁ, E., GNOTH, M. 2004. Pedagogical practice. Nitra: Slovak University of Agriculture, 2004.

State curriculum for ISCED 2 and ISCED 3

KONTÍROVÁ, S. 2011. Pedagogical practice of students of academic subjects. Košice: Pavel Jozef Šafárik University, 2011.

#### **Languages necessary to complete the course:**

#### **Notes:**

|                                                                                                                                                                                                                                                                                                                                                                           |     |       |     |     |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-----|-----|-----|-----|
| <b>Past grade distribution</b>                                                                                                                                                                                                                                                                                                                                            |     |       |     |     |     |     |
| Total number of evaluated students: 22                                                                                                                                                                                                                                                                                                                                    |     |       |     |     |     |     |
| A                                                                                                                                                                                                                                                                                                                                                                         | ABS | B     | C   | D   | E   | FX  |
| 81,82                                                                                                                                                                                                                                                                                                                                                                     | 0,0 | 18,18 | 0,0 | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> RNDr. Michal Winczer, PhD., Mgr. Michaela Vargová, PhD., RNDr. Martina Bátorová, PhD., PaedDr. Peter Horváth, PhD., M. A. Linda Steyne, PhD., PhDr. Michael Fuchs, Mgr. Milica Križanová, PhD., PaedDr. Anna Drozdíková, PhD., doc. PaedDr. Elena Čipková, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., RNDr. Soňa Kudličková, CSc. |     |       |     |     |     |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                                                                                                                                                                            |     |       |     |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                                                                                                                                                                       |     |       |     |     |     |     |

## COURSE DESCRIPTION

|                                                                                                                                                                                                                       |     |       |                                                              |       |      |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|--------------------------------------------------------------|-------|------|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |     |       |                                                              |       |      |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |     |       |                                                              |       |      |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |     |       |                                                              |       |      |     |
| <b>Course ID:</b><br>PriF.KDPP/N-bXDI-012/22                                                                                                                                                                          |     |       | <b>Course title:</b><br>Theoretical Foundations of Education |       |      |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |     |       |                                                              |       |      |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |     |       |                                                              |       |      |     |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                       |     |       |                                                              |       |      |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |     |       |                                                              |       |      |     |
| <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: 70                                                                                                                                              |     |       |                                                              |       |      |     |
| A                                                                                                                                                                                                                     | ABS | B     | C                                                            | D     | E    | FX  |
| 24,29                                                                                                                                                                                                                 | 0,0 | 32,86 | 21,43                                                        | 12,86 | 8,57 | 0,0 |
| <b>Lecturers:</b> PhDr. ThLic. Peter Ikhardt, PhD.                                                                                                                                                                    |     |       |                                                              |       |      |     |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                                        |     |       |                                                              |       |      |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |     |       |                                                              |       |      |     |



## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                             |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                             |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                             |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-132/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Course title:</b><br>Theoretical Fundaments of Education |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                             |
| <b>Number of credits:</b> 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                             |
| <b>Recommended semester:</b> 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                             |
| <b>Educational level:</b> I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                             |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                             |
| <b>Antirequisites:</b> FMFI-Prif.KDPP/1-UXX-132/10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                             |
| <b>Course requirements:</b><br>The course is completed by evaluation, the ratio of continuous / final evaluation is 100/0.<br>Continuous assessment: active participation in seminars and cooperation with other students (30), homework assignments (30), elaboration of the assigned topic and its presentation at the seminar (20), seminar paper (20)<br>The condition for successful completion of the course is to obtain half of the points for participation in seminars and homework and submit a presentation and seminar paper. At least 60% of the maximum possible evaluation of the subject must be obtained. The rating is given on a scale:<br>A (100-91%, excellent - excellent results),<br>B (90-81%, very good - above average standard),<br>C (80-73%, good - normal reliable work),<br>D (72-66%, satisfactory - acceptable results),<br>E (65-60%, sufficient - results meet minimum criteria),<br>Fx (59-0%, insufficient - additional work required)<br>Scale of assessment (preliminary/final): 100/0 |                                                             |
| <b>Learning outcomes:</b><br>Upon successful completion of the course, the students have basic knowledge of selected pedagogy disciplines about the nature of education, the philosophical basis of pedagogical thinking and theoretical concepts of education in a historical context. They understand basic pedagogy term, has knowledge of the domains of education. They know the basic development trends of pedagogy, as well as the basic developmental stages of the school. Students understand the school as an institution of formal education and knows the forms of non-formal education. They have basic knowledge about selected current problems of pedagogical practice, about the family and its functions, about the pupil and about learning problems and about educational problems at school.                                                                                                                                                                                                             |                                                             |
| <b>Class syllabus:</b><br>Educational sciences: traditional and modern concepts. Understanding of education and its explanation. Socialization and education. Philosophical basis of pedagogical thinking. Theoretical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                             |

concepts of education. Social context of upbringing and education. Education in the changes of time (basic development trends of pedagogy - J. A. Komenský, J. J. Rousseau, J. H. Pestalozzi, J. F. Herbart and pedagogical currents of the 20th century). Subject and object of education, educational interaction. Teacher personality and profession. Institutionalization of education. School, its development and functions. Alternative schools. The student and his social role, family and its educational function, cooperation with the school. Selected current problems of educational practice. Educational problems, education of students with special educational needs. Educational impacts of the school (school climate, hidden curriculum). From education to self-education, free education.

#### **Recommended literature:**

BAĎURÍKOVÁ, Z. et al. 2001. School pedagogy. Bratislava: Comenius University.  
 BREAUX, A. : Quick help for teachers. Portal. 2020.  
 DYTRTOVÁ, R. - KRHUTOVÁ, M. 2009. Teacher: příprava na profesi. Prague: City.  
 FONTANA, D. 2014. Psychology in school practice. Prague: Portal.  
 GINNIS, P. : Effective Teaching Tools for Teachers. Universum Publishing House, 2019.  
 GORDON, T. : School without Losers. Malvern. 2015.  
 HAVLÍK, R. - KOŤA, J. 2001. Sociology of education and school. Prague: Portal.  
 HELUS, Z. 2007. Social psychology for pedagogues. Prague: City.  
 HLASNA, Slavka et al. 2006. Introduction to pedagogy. Nitra: Enigma.  
 JEDLIČKA, R., KOŤA, J., SLAVÍK, J., 2018. Educational psychology for teachers. Prague: Grada Publishing, a. s., 2018.  
 KRATOCHVÍLOVÁ, Emília et al. 2007. Introduction to pedagogy. Trnava: Faculty of Education, Trnava University in Trnava.  
 KYRIACOU, CH. 2005. Solving educational problems at school. Prague: Portal.  
 KYRIACOU, CH. 2008. Key teacher skills. Prague: Portal.  
 MOŽNÝ, I. 2008. Family and society. Prague: SocioLOGické Nakladatelství (SLON).  
 ONDREJKOVIC, P. et al. 2009. Social pathology. Bratislava: Science.  
 PRŮCHA, J. 2017. Modern pedagogy. Prague: Portal.  
 POTOČÁROVÁ, M. 2008. Pedagogy of the family. Bratislava: UK.  
 SMETÁČKOVÁ, I., ŠTECH, S. : Učitelské vyhoření. Portal. 2020.  
 VACEK, P. 2008. Development of moral consciousness of students. Prague: Portal.  
 VALIŠOVÁ, A - KASÍKOVÁ, H. 2007. Pedagogy for teachers. Prague: City.  
 ZELINA, M. 2004. Theories of education or search for good. Bratislava: SPN.

#### **Languages necessary to complete the course:**

Slovak and Czech language

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 78

| A     | B     | C     | D    | E   | FX   |
|-------|-------|-------|------|-----|------|
| 61,54 | 20,51 | 10,26 | 6,41 | 0,0 | 1,28 |

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

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                            |
| <b>Course ID:</b><br>FMFI.KDMFI/1-UXX-134/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Course title:</b><br>Theory of Teaching |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 2 / 1 <b>per level/semester:</b> 28 / 14<br><b>Form of the course:</b> on-site learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                            |
| <b>Number of credits:</b> 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                            |
| <b>Recommended semester:</b> 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                            |
| <b>Educational level:</b> D, I., II.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                            |
| <b>Prerequisites:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                            |
| <b>Antirequisites:</b> FMFI.KDMFI/1-UXX-134/18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                            |
| <b>Course requirements:</b><br>The course is completed by a written exam (20%).<br>A minimum of 60% of the semester is required to be admitted to the exam.<br>During the semester, students implement at least one didactic output (20%), actively participate in exercises (20%), solve assignments during lectures (10%), prepare a term paper (10%), read and report the content of recommended literature (10%), 2 tests during the semester (10%)<br>The rating is given on a scale:<br>A: 93-100%, excellent - excellent results,<br>B: 85-92%, very good - above average standard,<br>C: 76-84%, good - normal reliable work,<br>D: 68-75%, satisfactory - acceptable results,<br>E: 60-67%, sufficient - the results meet the minimum criteria,<br>Fx: 0-59%, insufficient - additional work required<br>Scale of assessment (preliminary/final): 80 /0 20                                                           |                                            |
| <b>Learning outcomes:</b><br>Acquisition of basic theoretical knowledge in didactics, development of knowledge, skills and attitudes associated with the teaching profession, the ability to plan and organize students' learning activities. Students will gain an overview of basic didactic terminology, knowledge prerequisites to view the teaching process as a system whose individual elements (teaching objectives, curriculum content, teaching methods, teaching aids and techniques, organizational forms of teaching, teaching concepts; communication between teacher and students, as well as monitoring and evaluation of the teaching process and teacher preparation for teaching) are closely linked and to be able to use the acquired knowledge in specific planning of the teaching process (creating a "scenario" of the lesson).<br>They will gain basic habits of working with the class as a group. |                                            |
| <b>Class syllabus:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                            |

Didactics as a scientific discipline (subject of research, methods of didactic research, terminology), its position in the system of pedagogical disciplines

Didactics system

Teaching process

Content of education, curriculum, didactic analysis of curriculum

Taxonomy of educational goals

Teaching planning

Teaching principles

Teaching methods, teaching strategies

Testing and evaluation

Learning tasks and didactic tests

Current teaching concepts (project, problematic, programmed, differentiated, group, cooperative, problematic, project, research-oriented, authentic, constructivist, online, electronic, hybrid, modular, integrated thematic (ITV), STEM / STEAM, mastery learning, closed cycle (SVUC), Hejného method

Organizational forms of teaching

Teaching aids and teaching equipment

#### **Recommended literature:**

ČAPEK, R. 2015. Modern didactics: Lexicon of teaching and assessment methods. Prague: City.

FERENCOVÁ, J., KOSTURKOVÁ, M. 2020. Chapters from didactics. From learning to teaching. Prešov: Rokus publishing.

KALHOUS, Z., OBST, O. 2001. School didactics. Prague: Portal.

SKALKOVÁ, J. 2007. General didactics. 2nd ed. Prague: City.

KOŽUCHOVÁ, M. et al. 2000. General didactics. Bratislava: Science.

OBDRŽÁLEK, Z. et al. 2003. Didactics for elementary school students. Bratislava: UK.

PASCH, M. et al. 1998. From educational program to lesson. Prague: Portal.

PETLÁK, E. 2016. General didactics. Bratislava: Iris.

PETTY, G. 1996. Modern teaching. Prague: Portal.

PRŮCHA, J. 2002. Modern pedagogy. 3rd ed. Prague: Portal.

TUREK, I. 2014. Didactics. Bratislava: Iura Edition.

TÓTHOVÁ, R., KOSTRUB, D., FERKOVÁ, Š. 2017. Pupil, teacher, teaching. Bratislava: Rokus.

#### **Languages necessary to complete the course:**

Slovak, Czech

#### **Notes:**

#### **Past grade distribution**

Total number of evaluated students: 109

| A     | B     | C     | D   | E    | FX   |
|-------|-------|-------|-----|------|------|
| 46,79 | 24,77 | 14,68 | 5,5 | 1,83 | 6,42 |

**Lecturers:** Mgr. Karolína Miková, PhD.

**Last change:** 22.06.2022

**Approved by:**

## COURSE DESCRIPTION

|                                                                                                                                                                                             |       |                                           |     |     |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------|-----|-----|------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                             |       |                                           |     |     |      |
| <b>University:</b> Comenius University Bratislava                                                                                                                                           |       |                                           |     |     |      |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                 |       |                                           |     |     |      |
| <b>Course ID:</b><br>PriF.KZ/N-XXXX-006/21                                                                                                                                                  |       | <b>Course title:</b><br>Theory of species |     |     |      |
| <b>Educational activities:</b><br><b>Type of activities:</b> seminar<br><b>Number of hours:</b><br><b>per week: 2 per level/semester: 28</b><br><b>Form of the course:</b> on-site learning |       |                                           |     |     |      |
| <b>Number of credits:</b> 2                                                                                                                                                                 |       |                                           |     |     |      |
| <b>Recommended semester:</b> 2., 4., 6.                                                                                                                                                     |       |                                           |     |     |      |
| <b>Educational level:</b> I., II.                                                                                                                                                           |       |                                           |     |     |      |
| <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: 82                                                                                                                    |       |                                           |     |     |      |
| A                                                                                                                                                                                           | B     | C                                         | D   | E   | FX   |
| 75,61                                                                                                                                                                                       | 14,63 | 2,44                                      | 0,0 | 0,0 | 7,32 |
| <b>Lecturers:</b> doc. Mgr. Peter Vďačný, Dr.rer.nat                                                                                                                                        |       |                                           |     |     |      |
| <b>Last change:</b> 07.11.2022                                                                                                                                                              |       |                                           |     |     |      |
| <b>Approved by:</b>                                                                                                                                                                         |       |                                           |     |     |      |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                                       |       |                                    |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                                     |       |                                    |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                                           |       |                                    |     |     |     |
| <b>Course ID:</b><br>PriF.KOrCh/N-bCXX-046/22                                                                                                                                                                         |       | <b>Course title:</b><br>Toxicology |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture / seminar<br><b>Number of hours:</b><br><b>per week:</b> 1 / 1 <b>per level/semester:</b> 14 / 14<br><b>Form of the course:</b> on-site learning |       |                                    |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                                           |       |                                    |     |     |     |
| <b>Recommended semester:</b> 6.                                                                                                                                                                                       |       |                                    |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                                          |       |                                    |     |     |     |
| <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: 14                                                                                                                                              |       |                                    |     |     |     |
| A                                                                                                                                                                                                                     | B     | C                                  | D   | E   | FX  |
| 50,0                                                                                                                                                                                                                  | 21,43 | 28,57                              | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> Mgr. Henrieta Stankovičová, PhD., RNDr. Katarína Stebelová, PhD., Mgr. Jasna Hradski, PhD.                                                                                                          |       |                                    |     |     |     |
| <b>Last change:</b> 07.11.2022                                                                                                                                                                                        |       |                                    |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                                   |       |                                    |     |     |     |

## COURSE DESCRIPTION

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------|-----|-----|-----|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                  |     |                                                              |     |     |     |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Course ID:</b><br>PriF.KEM/N-bEXX-160/22                                                                                                                                                        |     | <b>Course title:</b><br>We are Moving towards Sustainability |     |     |     |
| <b>Educational activities:</b><br><b>Type of activities:</b> lecture<br><b>Number of hours:</b><br><b>per week:</b> 2 <b>per level/semester:</b> 28<br><b>Form of the course:</b> on-site learning |     |                                                              |     |     |     |
| <b>Number of credits:</b> 2                                                                                                                                                                        |     |                                                              |     |     |     |
| <b>Recommended semester:</b> 5.                                                                                                                                                                    |     |                                                              |     |     |     |
| <b>Educational level:</b> I.                                                                                                                                                                       |     |                                                              |     |     |     |
| <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                                                                                                                                                                                                  | B   | C                                                            | D   | E   | FX  |
| 100,0                                                                                                                                                                                              | 0,0 | 0,0                                                          | 0,0 | 0,0 | 0,0 |
| <b>Lecturers:</b> doc. RNDr. Katarína Pavličková, CSc., RNDr. Božena Šerá, PhD., RNDr. Hubert Žarnovičan, PhD.                                                                                     |     |                                                              |     |     |     |
| <b>Last change:</b> 27.09.2022                                                                                                                                                                     |     |                                                              |     |     |     |
| <b>Approved by:</b>                                                                                                                                                                                |     |                                                              |     |     |     |

## COURSE DESCRIPTION

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                           |     |                                                            |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                         |     |                                                            |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                               |     |                                                            |     |     |       |
| <b>Course ID:</b><br>PriF.KTV/N-bUXX-201/22                                                                                                                                                               |     | <b>Course title:</b><br>Winter Physical-Education Training |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> training session<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning |     |                                                            |     |     |       |
| <b>Number of credits:</b> 1                                                                                                                                                                               |     |                                                            |     |     |       |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                   |     |                                                            |     |     |       |
| <b>Educational level:</b> I.                                                                                                                                                                              |     |                                                            |     |     |       |
| <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: 18                                                                                                                                  |     |                                                            |     |     |       |
| A                                                                                                                                                                                                         | B   | C                                                          | D   | E   | FX    |
| 66,67                                                                                                                                                                                                     | 0,0 | 0,0                                                        | 0,0 | 0,0 | 33,33 |
| <b>Lecturers:</b> Mgr. Martin Mokošák, PhD.                                                                                                                                                               |     |                                                            |     |     |       |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                            |     |                                                            |     |     |       |
| <b>Approved by:</b>                                                                                                                                                                                       |     |                                                            |     |     |       |



## COURSE DESCRIPTION

|                                                                                                                                                                                                           |     |                                                            |     |     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                           |     |                                                            |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                         |     |                                                            |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                               |     |                                                            |     |     |       |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-107/22                                                                                                                                                               |     | <b>Course title:</b><br>Winter Physical-Education Training |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> training session<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 5d<br><b>Form of the course:</b> on-site learning |     |                                                            |     |     |       |
| <b>Number of credits:</b> 2                                                                                                                                                                               |     |                                                            |     |     |       |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                   |     |                                                            |     |     |       |
| <b>Educational level:</b> I.                                                                                                                                                                              |     |                                                            |     |     |       |
| <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: 140                                                                                                                                 |     |                                                            |     |     |       |
| A                                                                                                                                                                                                         | B   | C                                                          | D   | E   | FX    |
| 59,29                                                                                                                                                                                                     | 0,0 | 0,0                                                        | 0,0 | 0,0 | 40,71 |
| <b>Lecturers:</b> PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková                        |     |                                                            |     |     |       |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                            |     |                                                            |     |     |       |
| <b>Approved by:</b>                                                                                                                                                                                       |     |                                                            |     |     |       |

## COURSE DESCRIPTION

|                                                                                                                                                                                                         |     |                                                 |     |     |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------|-----|-----|-------|
| <b>Academic year:</b> 2022/2023                                                                                                                                                                         |     |                                                 |     |     |       |
| <b>University:</b> Comenius University Bratislava                                                                                                                                                       |     |                                                 |     |     |       |
| <b>Faculty:</b> Faculty of Natural Sciences                                                                                                                                                             |     |                                                 |     |     |       |
| <b>Course ID:</b><br>PriF.KTV/N-bXTV-109/22                                                                                                                                                             |     | <b>Course title:</b><br>Ďumbier mountain hiking |     |     |       |
| <b>Educational activities:</b><br><b>Type of activities:</b> other<br><b>Number of hours:</b><br><b>per week:</b> <b>per level/semester:</b> 3d<br><b>Form of the course:</b> on-site learning          |     |                                                 |     |     |       |
| <b>Number of credits:</b> 1                                                                                                                                                                             |     |                                                 |     |     |       |
| <b>Recommended semester:</b> 1., 3., 5.                                                                                                                                                                 |     |                                                 |     |     |       |
| <b>Educational level:</b> I.                                                                                                                                                                            |     |                                                 |     |     |       |
| <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: 155                                                                                                                               |     |                                                 |     |     |       |
| A                                                                                                                                                                                                       | B   | C                                               | D   | E   | FX    |
| 64,52                                                                                                                                                                                                   | 0,0 | 0,0                                             | 0,0 | 0,0 | 35,48 |
| <b>Lecturers:</b> PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková, Mgr. Kristína Vanýsková, Mgr. Denisa Šed'ová |     |                                                 |     |     |       |
| <b>Last change:</b> 01.08.2022                                                                                                                                                                          |     |                                                 |     |     |       |
| <b>Approved by:</b>                                                                                                                                                                                     |     |                                                 |     |     |       |