

## Course Information Sheet

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| <b>University:</b> University of Prešov in Prešov                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                 |
| <b>Faculty:</b> Faculty of humanities and natural sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>Code:</b> 2EKO/MEPOEK/22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Title of Course:</b> Methods in Soil Ecology |
| <b>Form of Study:</b> Lectures, Seminars<br><b>Number of contact hours:</b> 2 hours lectures/2 hours seminars per week<br><b>per week:</b> 2/2 <b>per level/semester:</b> 20 lectures, 20 seminars, 110 hours of self-work                                                                                                                                                                                                                                                                                                                                                                                        |                                                 |
| <b>Number of credits:</b> 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                 |
| <b>Semester:</b><br><b>Winter/summer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <b>Degree/Level:</b> 3. (PhD.) degree                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                 |
| <b>Prerequisites:</b> -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                 |
| <b>Grading Policy (Assessment/Evaluation):</b><br>participation in lectures, seminar assignments, final exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |
| <b>Aims and Objectives:</b><br>The student knows theoretically and practically basic methods that are used in soil science. He/She can apply individual methods in the study of soil ecology issues. He/She can process and interpret the obtained results.                                                                                                                                                                                                                                                                                                                                                       |                                                 |
| <b>Syllabus/Indicative Content:</b><br>Basic terminology in soil ecology<br>Methods for determining the physico-chemical properties of soil<br>Methods for determining soil microbial indicators - soil respiration, soil microbial biomass<br>Methods for determination of biochemical soil indicators - soil enzymology<br>Soil biota - as an indicator of soil quality and health (selected groups of edaphon)<br>Determination of hazardous substances in the soil environment<br>Bioindication and remediation methods in soil ecology<br>Protection of the soil environment due to anthropogenic activities |                                                 |
| <b>Suggested readings:</b><br>ALEF, K., NANNIPIERI, P. 1995. Methods in Applied Soil Soil Microbiology nad Biochemistry. Academic Press, ISBN 0-12-513840-7, p. 576.<br>Fejér, J., Bobuľská, L. 2015. Pedológia. Prešov: prešovská univerzita v Prešove.<br>Pansu, M. 2016. Handbook of Soil Analysis. Berlin: Springer-Verlag, p. 993.<br>White, R.E. 2005. Principles and Practice of Soil Science. John Wiley & Sons, p. 376.                                                                                                                                                                                  |                                                 |
| <b>Language of Instruction:</b><br>Slovak, English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                 |
| <b>Other course information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| <b>Grading history</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |
| <b>Lecturer/Instructor:</b><br>Ing. Lenka Bobuľská, PhD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                 |
| <b>Last update:</b> 2. mája 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |
| <b>Approved by:</b> prof. PaedDr. Ján Kočšo, PhD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                 |