

Learning outcomes graduate programme of environmental sciences

1. Apply the fundamental theoretical approaches in creating methodology in researching, protecting and managing geological resources, geographic points of interest and biological systems in the environment
2. Create measures and means of ensuring high ecological standards in management
3. Create sustainable development programmes in technological processes and production that have significant environmental impacts
4. Analyse environmental impact studies and procedures that enable the protection and management of geological, geographic and biological resources
5. Apply the organisation of biological and landscape protection in national parks
6. Create rules and regulations pertaining to the regulation of biological, geographic and geological principles and anthropogenic environmental impacts
7. Assess on the basis of scientific research and scientific data how negative changes in environmental conditions impact environmental quality
8. Analyse the consequences of geographic influence, climatic extremes and changes, and their impacts on the environment and living organisms and their communities
9. Design geoecological studies, planning and evaluation of landscapes
10. Evaluate nature assessments in the drafting of physical and regional plans, expert assessments, environmental impact studies and other documentation relating to environmental management
11. Present scientific findings with arguments and explanations for the purpose of interpreting the scientific findings and educational transfer and interpretation of scientific findings to the non-scientific community.
12. Present scientific findings with arguments and explanations for the purpose of interpreting the scientific findings to regulators and administrative bodies
13. Give a supported categorisation of terrestrial waters, with a proposal for the management of aquatic resources
14. Apply scientific findings on the environmental to the efficient management of the sea and coastal areas, abiding by sustainable development principles
15. Apply scientific findings on the environment to the efficient management and protection of karst areas, abiding by sustainable development principles
16. Create waste management programmes with the evaluation of environmental impact studies of waste disposal
17. Analyse the geomorphological, hydrographic and microclimatic specificities of karst
18. Research (measurements, observations, recording with geocoding and experiments) the biological, geographic and geological principles and mechanisms
19. Evaluate the significance of research results and routine analysis with links to the data from the expert and scientific literature in the field of environmental science
20. Analyse the impacts of human activities and structures (settlements, transport) on the environment, geological resources, geographic and biological elements
21. Identify the effects of ecotoxicological and toxicological hazards and risks of environmental pollutants and xenobiotics
22. Propose solutions to environmental problems based on qualitative and quantitative geographical, geological and biological research

23. Design a field study, with the management of organisation and execution
24. Interpret complex statistical and informational data as results of measurements, processing and analysis in environmental sciences
25. Independently organise methodology of researching complex environmental problems by applying the scientific methods from the fields of biology, geology and ecology
26. Apply statistical and graphical methods in the analysis and presentation of results and data relating to environmental research
27. Recognise the highly complex spatial and environmental issues, with proposals for their resolution
28. Improve IT skills in the collection and analysis of environmental data
29. Apply GIS techniques in developing geospatial databases and thematic maps in analogous and digital form
30. Create models to predict environmental impacts on biological systems and human population