

UNISCAPE Research and Teaching

Technická univerzita Zvolen

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 - **UNIVERSITY:** Technická univerzita Zvolen
 - **DEPARTMENT(S) INVOLVED:** Department of Landscape Planning and Design (DLPD)
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EDUCATION PROGRAMMES

Bachelor or equivalent:

Visualization Methods I., Ecostabilizing and water management measures in the countryside, Agroecology, Dendrology and Ecology of Species, Environmental Aspects of Agriculture and Forestry, Extensive fruit production, Growing of Medicinal Herbs, Hiking and Outdoor Activities, Introduction to Agriculture, Introduction to Designing, Introduction to Landscape Engineering, Permaculture, Production Ecology, Vegetation Design in Landscape, Woody Species Propagation

Master:

Visualization Methods I., Spatial Planning, Landscape Design, Applied Dendrology, Studio Work I., Studio Work II., Care on Vegetation, Cultural heritage protection, Public participation in decision-making processes, Ecology of Grass Stands, Land use for Tourism, Landscape Recreation Potential, Landscaped Dendrology, Urban Ecosystem, Woody Species Protection

Post graduate | Specialization | Ph.D. :

Urban Ecosystem, Spatial Planning, Landscape Design, Landscape Dendrology, Agroecosystem

RESEARCH ON LANDSCAPE

main issues/ topics of research

01 Landscaping division (DLPD) includes study and research activities concerned with landscape planning and design. Landscaping embraces changes of land cover structures in accordance with principles of sustainable development. Our domain is assessment of visual landscape and landscape character and proposals of ecostabilizing measures and incentives in the countryside regarding European Landscape Convention (CoE, 2000). Knowledge is applied in case studies which are usually ground works for spatial planning and EIA documentations. Broader conceived landscape studies deal with landscape carrying capacity, ecological stability, heterogeneity, biodiversity and environmental functions of the studied territory, cultural landscapes, and their values and landscape identity (in co-operation with local/regional non-governmental organisations and public), tourism aspects of landscape. Currently are running under the Department of Landscape planning and Design two international projects related to this landscaping: ERASMUS KA21 : 2016-1-SK01-KA202-022502; FEAL: multifunctional Farming for the sustainability of European Agricultural Landscapes <http://cs.feal-future.org/en> COST Action TU1401, Transport and Urban Development Renewable energy and landscape quality (RELY): <http://cost-rely.eu/>

02 Dendrology and care on greenery division (DLPD) embraces applied dendrology, dendro-ecology, production ecology, management of recreational areas (parks, public spaces ...) and nature based tourism. It focuses on tree species and their importance in landscape-ecological stability, landscape values and visual appearance of landscape. The importance of woody plants in landscape structure is indisputable and woody plants and forms are one of the key elements of landscape planning and design. In research and study areas include:

- Elementary bio-ecological woody plants characteristics;
- Domestic and introduced woody plants in forest and non-forest ecosystems;
- Breeding and woody plants reproduction;
- Woody plants pests;
- Ecological production of terrestrial ecosystems;

03 Agricultural division (DLPD) focuses on subjects and research activities concerned with production and non-production potential of agricultural land, agricultural ecosystems and reconstructing of agricultural land. A key quality issue of agro-ecology is solving ecological optimization of landscape composition and functional land use in context to organization of soil fund on the agrarian parcels. Agroecosystems establish conditions of the mass balance and substance distribution in the landscape. It is linked to the non-production and production potential of the country. Agri-environmental programmes are appropriate tools for application of the agri-environmental schemes knowledge.

The division deals with following topics:

- Production and non-production potential of agricultural landscape;
- Agricultural ecosystems in context to landscape ecology;
- Energy flow of biomass in landscape;
- Agricultural land restructuring and proposals of landscape design;
- Elaboration of agri-environmental programmes;
- Medicinal plants cultivation.

TOPICS

- TERRITORIAL PLANNING
- ÚZEMNÉ PLÁNOVANIE; DESIGN
- PROJEKTOVANIE; HISTORICAL LANDSCAPE
- HISTORICKÁ KRAJINA; GREENERY
- VEGETÁCIA; AGRICULTURE

BIBLIOGRAPHY

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SLÁMOVÁ M., JANČURA P., MODRANSKÝ J. 2018. The Quality Assessment of Forests in the Cadastral District of Zvolen (Slovakia). *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 66(1): 183 – 194. <https://doi.org/10.11118/actaun201866010183>

SLÁMOVÁ, M., KRČMÁŘOVÁ, J., HRONČEK, P., KAŠTIEROVÁ, M. 2017. Environmental factors influencing the distribution of agricultural terraces: Case study of Horný Tisovnik, Slovakia. In *Moravian Geographical Reports (IF 2.149)*. ISSN 1210-8812, Vol. 25, No. 1, 34-45. DOI: 10.1515/mgr-2017-0004

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