1. EDUCATION

1.1 Graduate study

Obligatory subjects

Hydrology
Landscape Ecology
Landscape Ecology and Bioecology
Meteorology and Hydrology
Landscape Engineering
Engineering Structures in a Landscape
River Training
Pedology
River Restoration
Integrated River Basin Management
Water Management
Hydrological Field Measurements
CAD Systems in Landscape Engineering
Water Regime of a Landscape
Irrigation and Drainage
GIS in Water Management

Optional subjects

Project 1 – Sustainable Landscape Development
Basics of the Design of Landscape Structures
CAD Systems in Water Management
Project Work
Computer Modelling in Water Management
Design of Small Water Reservoirs
Revitalization of Wetlands
CAD Systems in Environmental Engineering

1.2 Postgraduate courses

Hydrology
Hydrology of Surface Waters
Hydrology of Sub-Surface Waters

Hydrodynamics of Porous Media
Methods of Field and Laboratory Experiments in Hydrology
Mathematical Modelling of Hydrological and Hydraulic Processes
Simulation Methods, Algorithms and Programming
Evaluation of the Risk of Extreme Hydrological Processes
Geoinformatics
Methods and Models of Hydrological Balance
Methods of Hydrological Forecasting
Deterministic and Stochastic Models of Hydrological Processes
Landscape Planning
Revitalization of Rivers
Soil Water Regime
Hydrochemistry and Hydrobiology

2. THESES

2.1 Bachelor theses

There were 12 works.

2.2 Graduate theses

BEHAN, Š.: Analysis of Changes in Land Use and Their Impact on Runoff in a River Basin
Supervisor: VÝLETA, R.

BEREC, A: Proposals for Landscape Engineering Measures in a Selected River Basin
Supervisor: HLAVČOVÁ, K.

CELLER, M.: Proposals for Erosion Control and Evaluation of Their Effectiveness in the Sobotište Cadastral Area
Supervisor: VÝLETA, R.

HABURAJÓVÁ, M.: Application of a Rainfall Simulator for the Solution of Tasks in Water Management
Supervisor: VÝLETA, R.

HABURAJÓVÁ, M.: Application of a Rainfall Simulator for the Solution of Tasks in Water Management
Supervisor: VÝLETA, R.

HORDÓSI, G.: Design of the Garden of a Family House, Including Irrigation
Supervisor: BAJTEK, Z.

HUDCOVIČ, L.: Design of Erosion Control in the Turá Lúka Region
Supervisor: HLAVČOVÁ, K.
HUDEC, A.: Design of Drip Irrigation for Vineyards
Supervisor: BAJTEK, Z.

LISOVSZKI, E.: The Potential of Flood Risk Reduction through Changing the Land Use in Mid-Sized Catchments in the Myjava Region of Slovakia
Supervisor: SZOLGAY, J.

REŠUTÍKOVÁ, I.: Analysis of Soil Erosion in the Svacenický Jarok Catchment
Supervisor: KOHNOVÁ, S.

ŠAJERMANOVÁ, B.: Restoration of the River Channel and Adjacent Landscape Near a Former Water Mill
Supervisor: ŠKRINŇAR, A.

VASILAKI, M.: Analysis of Projected Changes of Short-Term Rainfall Characteristics for Selected Stations in Slovakia
Supervisor: KOHNOVÁ, S.

2.3 Doctoral theses

IVAN, P.: Evaluating Quality of Aquatic Habitat of Mountainous Rivers
Supervisor: MACURA, V.

JARABICOVÁ, M.: Soil Water Regime Predictions
Supervisor: SKALOVÁ, J.

RONČÁK, P.: Parameterization of Rainfall-Runoff Models for Modelling Runoff under Climate Change
Supervisor: HLAVČOVÁ, K.

SZÖEKEOVÁ, D.: Application of Multi-Regime Models for Analysis of Discharge Series
Supervisor: KOHNOVÁ, S.

VOJTKOVÁ, J.: Vegetation Effect on Erosion-Sedimentation Processes in the Floodplain Soils of the Schwechat River, Austria
Supervisor: MACURA, V.

3. RESEARCH

3.1 Research projects


Impact of Natural Hazards on Forest Ecosystems in Slovakia under the Conditions of a Future Climate (2016-2019, SZOLGAY, J.), Research Project of APW-15-0425


Preventing and Remediating Degradation of Soils in Europe through Land Care (RECARe). (2013-2018, SZOLGAY, J.), Research Project of 7FP No. 603498


Analysis of Climate and Hydrological Extremes by Data Mining and Hydroinformatic Methods for Adaptation Measures in a Landscape (2015-2018, ČISTÝ, M.), VEGA 1/0665/15


Study of Local and Spatial Properties of Hydrometeorological Extremes in the Conditions of Nonstationarity by Copulas (2013-2016, SZOLGAY, J.), VEGA 1/0776/13

3.2 International cooperation

Cooperating institutions

Department of Hydraulic Engineering, Faculty of Civil Engineering, Czech Technical University, Prague, Czech Republic
Department of Landscape and Water Management, Faculty of Civil Engineering, Technical University, Brno, Czech Republic
Institute of Hydraulics, Hydrology and Water Management, Faculty of Civil Engineering, Vienna University of Technology, Vienna, Austria
Department of Hydraulic Structures, Warsaw Agricultural University, Poland
University of Uppsala, Sweden
Delft Hydraulics, Delft, The Netherlands
Wageningen University, Wageningen, The Netherlands
European Joint Research Centre, ISPRA, Italy
University of Bologna, Italy
Institute of Hydromechanics and Water Resources Management, Swiss Federal Institute of Technology, Zürich, Switzerland
University of Padova, Department of Land and Agroforest Environments, Italy
University of Jean Moulin Lyon 3, Lyon, France
University of Thessaly, Volos, Greece
University of Natural Resources and Life Sciences, Institute of Hydrobiology and Aquatic Ecosystem Management, Vienna, Austria

Membership in international professional organizations

HLAVČOVÁ, K.: Member of the International Association of Hydrological Sciences
HLAVČOVÁ, K.: Member of the European Geosciences Union
KOHNÍKOVÁ, S.: Member of the European Geosciences Union
KOHNÍKOVÁ, S.: Member of the International Association of Hydrological Sciences
4. PUBLICATIONS

Books


Parts of Books


Journals


1. EDUCATION

1.1 Graduate study

Obligatory subjects

Basics of River Hydraulics
Biocorridors and EIA
Energy Utilization of Water Sources
Flood Protection and Energy Utilization of Reservoirs
Flow of Liquids
Groundwater Hydraulics
Hydraulic Structures
Hydraulic Structures in Land
Hydraulics
Hydrodynamics of a Porous Environment
Hydroinformatics
Hydromechanics
Project 1
Project 2
Project 3
Structures for the Protection and Utilization of Land
Studio Work – Hydraulic Engineering
Utilization of Water Power
Waterways
Weir Structures
Weirs and Waterways

Obligatory elective subjects

Biocorridors and Fish-Passes
CAD Systems in Land Planning
Computer Design Support in Hydraulic Engineering
Flood Hydraulics and GIS Mapping
Hydroinformatics
Management of Water Management
Mathematical Modelling in Water Management
Operational Management of Hydraulic Structures

Operating of Hydropower Plants
Planning and Constructing Water Structures
Practical Problems in Flood Protection
Project 1
Small Hydropower Plants
Software Applications in Hydraulics
Water Management Structures
Water Structures

Obligatory elective subjects

CAD in Hydraulic Structures
Computer Design Support in Hydraulic Engineering
Small Hydropower Plants

1.2 Postgraduate courses

Advanced Issues of Hydraulic Structures
Fluid Mechanics
Hydropower Systems
Physical Modelling of Hydrodynamic Phenomena

2. THESES

2.1 Bachelor theses

There were 14 works.

2.2 Graduate theses

BAĎURA, J.: The Use of a Combined 1D and 2D Hydrodynamic Model for Simulation of a Flood in the City of Bratislava
Supervisor: ORFÁNUS, M.

BAGI, M.: Assessment of the Existing Design of Flood Protection of the City District of Rača
Supervisor: ŠOLTÉSZ, A.

KOPÁČOVÁ, A.: Design of Water Management Measures and Utilization of Hydropower in the Area of Třstie
Supervisor: DUŠIČKA, P