

Courses in English

Study Plan of English Module LANDSCAPE ENGINEERING Winter Semester

Code	Course	ECTS	Course content
Z15-0065-I	Water Management Structures	6	Purpose and distribution of hydraulic engineering, hydraulic engineering importance for agriculture, population and national economy. Weirs fixed and mobile, design. Dams and reservoirs on agriculture and water tanks - their purpose and construction of dams. Design of low bulk dams. Use of hydropower situational solution hydropower. Water way - meaning, development, technical parameters. Small water reservoirs - importance of technical objects. Water balance of reservoir. Maintenance of water reservoirs. Technical solution of small water reservoir.
Z15-0067-I	Irrigation	4	Purpose and importance of irrigation for agricultural production. Development and extension of irrigation, irrigation history, present state. Relation among soil, water, plant and atmosphere. Dryness of region, reason and evaluation. Necessity of irrigation water, its determination by different methods. Losses of irrigation water. Irrigation water characteristics. Irrigation influence on soil. Sources of irrigation water, its consumption, distribution and supplying. Irrigation forms, irrigation types. Technical solution of irrigation and their application. Exploitation of irrigation for special purposes, irrigation automatization.

Z15-0071-I	<u>Environmental Management Systems</u>	6	<p>Environmentalistics – basic ideas, environment – factors, characteristics, organization approach to environment. E – policy, strategy, rules and priorities of the state environmental policy, National environmental action plan, European environmental policy (voluntary task). The documents of state environmental policy – environmental notes, the sources of the information. Risk management, ecological and health risk evaluation, management (voluntary task). Integrated pollution prevention and control - movie watching. Life cycle assessment, the phases of LCA, the value of LCA evaluation - movie watching. Definitions and characteristics of cleaner production, the tool for cleaner production evaluations, ecodesign- movie watching. Environmental management – basics, advantages of environmental management - - movie watching. The system of environmental management, Deming’s model, The structure of ISO 1400X. The projecting of environment management system – planning, implementation and management, general requirements, control tasks, Environmental audit (part of the seminar project). National systems of environmental labelling, environmental labels and proclamations, the institutions of E-evaluation and labelling (voluntary task). Environmental management system and ISO 9001, the differences between EMS and EMAS, EMAS requirements, Eco balance in E-management, evaluation of environmental performance, environmental indicators selection. Environmental report – definition, meaning, the progress (part of the seminar project), Environmental assessment of sites and organizations.</p>
621Z404	<u>Small Reservoirs and Ponds</u>	4	<p>Types of the most projected and managed small water reservoirs. Location, placement and incorporate of small water reservoirs in the agricultural landscape. Fundamentals of aquaculture, fish environment, cold and warm water systems. Situation design of fishpond, calculation of losses by evaporation, infiltration and dam penetration. Technical equipment of ponds - dam (wall), inlet, outlet. Irrigation and drainage reservoirs - situation design in the landscape, water management solution.</p>
Z15-0087-I	<u>Soil Resources Registry</u>	4	<p>The identification of the problems in the countryside and propose measures. The process of technical documentation general principles of functional organization of land. Basic GIS skills.</p>

Z15-0020-I	<u>Biotechnics of Landscape Verdure</u>	6	The riparian vegetation, windbreaks, green shelterbelts. The landscape greenery used for redevelopment and revitalization of the devastated areas. Functional and spatial specificities of the scattered greenery. The criteria for selection of the suitable woody plants for landscape greenery. The methods and technologies of the establishment and maintenance of landscape greenery. The specificities in regeneration of the landscape greenery and techniques used for these purposes. Revitalization of the landscape greenery. Technologies and techniques of revitalization, which are applied on areas damaged by agricultural and industrial activities. Within the course are 15 hours of the field exercise.
Z15-0007-I	<u>Diploma Thesis Seminar</u>	2	The sequence of steps related to the elaboration of the diploma thesis - basic structure, special requirements. Text preparation. Preparation of documentation. Quote and list of bibliographic links. Formal aspect of work preparation and adaptation. Forms of presentation in the defense of the diploma thesis.
	Total	32	