Study Programme: Doctoral Academic Studies in Environmental Protection		
Course Title: Ecosystem approach to ecological status assessment and environmental classifications	**Curse code:**	DZZS -606
Course status: elective		
ECTS: 15		
Requirements: none		
Course Objective: The course objective is to promote integrative ecosystem approach to ecological status assessment and use of various biological methods for monitoring, classification, impact assessment and trend analysis in environmental protection practices.		
Course Outcome: The successful candidate will be qualified to use and apply various biological methods in environmental protection practices.		
Course Content Basic ecological principles, processes and ecosystem approach to environmental protection. Biological methods in environmental monitoring, ecological status assessment, ecological impact assessment, trend analyses and adverse ecological effect mitigation, under valid EU and national legislation. Biological quality elements and indicative parameters in environmental monitoring on various levels of biological organisation. Individual level: bioaccumulation, bioassays, biomarkers, survival and growth rate, morphological parameters, reproduction, behaviour. Population: abundance, recovery potential, population dynamics, sex and age structure. Community composition and structure; biodiversity, similarity, trophic indices, biological indicator – sensitive vs. tolerant species. Measurable ecosystem endpoints: productivity, respiration, degradation, species richness. Multi-metric parameters, predictive models. Biological methods in risk assessment in EU and national legislation regarding industrial chemicals, biocides, plant protection products, ecological status assessment (aquatic), atmospheric pollution monitoring, soil productivity and quality assessment. Ecosystem approach in environmental impact assessment.		
Active teaching hours: 150 (75+75)	**Lectures:** 5 (75)	**Study Research Work:** 5 (75)