Study program: PhD

Course Title: Remediation (DZZS-705)

Course status: Elective

ESPB number: 15

Requirement: None

Course objective:
Training students to individually perform assessment and remediation of the contaminated sites.

The course outcome:
After completing the course, students should be able to independently apply gained knowledge of the remediation processes for contaminated sites and remediation management processes; independently plan and carry out experiments and critically evaluate the results of monitoring remediation processes; independently select the best remediation technique.

The course content:
Theoretical study:
Mechanisms and kinetics of biodegradation and biotransformation of specific pollutants. Processes in porous mediums during remediation: physical, chemical and biological processes of contaminated sites, distribution mechanisms of pollution, transport of nutrients and electron acceptors, respiration. Evaluation of contaminated sites and monitoring: hydro-geological characteristics of the site, aquifer characterization. Monitoring of natural remediation. Choosing the best remediation techniques. Remediation processes management.

Practical lessons: Project design – Evaluation of the selected sites and identifying the best remediation technique.

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	