Name of the course	**Processes of treatment of waste streams and bioremedy of environment**
Number of instruction hours	20
Outline of course/module content	Water, soil and air protection. Biological processes of waste streams. Bioremedioation of waste streams in present in environment (in-situ and ex-situ). Physiology, growth conditions and metabolism of microorganisms. Selection of microorganisms for removal of inorganic, organic and toxic compounds from waste streams. Characteristic physical and chemical, and biological and ecotoxicological indicators. Treatment of waste water by activated sludge, and biofiltration, and in sequencing batch systems and membrane biorectors. Bioremediation of ground water and leachates. Composting and bioremedy of solid wastes under the aerobic and the anaerobic conditions. Application of mixed cultures from environment and selected mixed cultures. Adsorption and biosorption of noxious gasses evolved during biodegradation of waste streams. Kinetics of biological process. Selection of reactors, analysis, optimization and process control.
Description of instruction methods	lectures and seminars
Description of course/module requirements	written exam and oral presentation of theme of seminar