

COURSE TITLE:

## CERTIFICATION PRACTICE OF ECOLOGY

COURSE DESCRIPTION:

Purpose of the practice: biological environmental analysis, introduction of environment conditions analysis and ecological certification methods; demonstration of basic environmental biotechnologies by plant visits, comparison of site remediation visits and their laboratory models

1. Monitoring of environment pollution indicators in polluted surface water / soil / ground-water systems. Indicator microbes, diversity and certification indexes. Ecological tests
2. Detection methods of degradation/elimination of harmful materials by analysis of communal metabolism
3. Applying respirometric methods for estimation of material demolition speed: measurement of biological oxygen demand and methanogenesis. Fitoremediation
4. Compilation of sewage model systems, microbiological and technological characterization. Visit in a Waste Water Treatment plant in Budapest
5. Compilation of composting model system, remediation microcosmos trials, monitoring of their microbes. Visit in a composting plant or remediation plant, analysis of technologies.

LITERATURE:

Practical Microbiology (Department of Microbiology, Institute of Biology, Faculty of Science, Eötvös Loránd University)

Brock Biology of Microorganisms-Benjamin Cummings; 13 edition (December 27, 2010) ISBN-10: 032164963X-

Microbiology: A Laboratory Manual (10th Edition) - Benjamin Cummings; 10 edition (January 24, 2013) ISBN-10: 0321840224

TEACHER:

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