



**FACULTY: ENVIRONMENTAL ENGINEERING**

**COURSE TITLE: On-site wastewater treatment and disposal systems**

**Number of contact hours: 30**

**Duration: 1 semester (spring)**

**ECTS credits: 4**

**Programme description:** The main goals of the course are following: to teach students understanding of interactions of the ecological systems with the pollutants, and principles of designing, construction and operation of onsite wastewater systems. As a result of teaching, students will be able to design and operate such systems. The lecture topics include: natural and constructed wetlands, mechanisms of wastewater treatment, media characteristics, role of the vegetation, hydrological balance on the wetlands, land treatment of wastewater, slow rate systems, rapid infiltration systems; design criteria, pre-treatment requirements, systems configuration, design procedures and criteria, site evaluation procedures, operation problems.

**Course type (hours):** lectures (15), workshops (15)

**Literature:** Kadlec R.H. and Knight R.L. "Treatment wetlands". Lewis Publishers.

Odum, H.T., and E.C. Odum. 2000 "Modeling for All Scales". Academic Press. San Diego.

US EPA "Onsite Wastewater Treatment and Disposal Systems. Design Manual".

**Assessment method:** joint group projects

**Lecturer:** Elżbieta Płaza, Ph.D.

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