



Course title: SEWAGE SLUDGE MANAGEMENT

ECTS credit allocation (and other scores): 3.0

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 45 (30 classes/15 lectures)

Course coordinator/ Department and e-mail: Dr. Habil. Eng. Dorota Kulikowska, Assoc. Prof./Department of Environmental Biotechnology; dorotak@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES

Calculations: amount of sewage sludge generated during municipal wastewater treatment; thickening of sewage sludge; methane fermentation; aerobic stabilization; sewage sludge conditioning and dewatering.

LECTURES

Generation of sewage sludge in municipal wastewater treatment systems. Sewage sludge characteristics. Law regulations. Unit processes in sewage sludge processing. Aerobic and anaerobic stabilization. Sludge thickening and dewatering, substances supporting the process. Hygienization. Possibilities of natural and agricultural use of sewage sludge. Thermal transformation as potential directions of sludge management.

Learning purpose: Getting to know the rules of sewage sludge management.

On completion of the study program the graduate will gain:

Knowledge: Has knowledge of sewage sludge management, knows the technological solutions of sludge management.

Skills: Can estimate the quantity and quality of sewage sludge and select technological solutions depending on the management strategy.

Social Competencies: Understands the risks of sewage sludge management.

Basic literature:

Materials given by the teacher

Supplementary literature:

Articles in the field of sewage sludge management

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 1.8

Student's independent work: 1.2