Faculty of Geoengineering

Course title: WATER AND WASTEWATER ANALYSIS

ECTS credit allocation (and other scores): 2.0 ECTS

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: 30

Course coordinator/ Department and e-mail: dr hab. inż. Renata Tandyrak/Department of Water Protection Engineering and Environmental Microbiology/ e-mail: renatat@uwm.edu.pl

Type of classes: classes

Substantive content

CLASSES: Theoretical introduction to laboratory practice in water and wastewater analysis. Determination of the physical properties of water and sewage, chemical and biochemical oxygen demand and chlorides. Determination of the concentration of dissolved oxygen by the Winkler method (and modification of the method), total chromium in wastewater – mineralization process, a calibration curve (line), the concentration of ammonium in wastewater – distillation process, the content of total phosphorus (mineralization process) and phosphate phosphorus in water. Surfactants in wastewater – extraction technique. Determination of monohydric and polyhydric phenols

LECTURES:

Learning purpose: determination of basic indicators of water and wastewater.

On completion of the study programme the graduate will gain:

Knowledge: The student knows the water pollutants and the characteristics of the composition and load of domestic wastewater.

Skills: The student takes simple analytical and research tasks related to the analysis of water and sewage.

Social Competencies: The student works independently and in a team, he is responsible for his own safety

Basic literature: 1) Hermanowicz W., Dożańska W., Dojlido J., Koziorowski B., Fizyczno-chemiczne badanie wody i ścieków, Wydawnictwo Arkady, Warszawa, 1999 2) Dojlido J.R., Chemia wód powierzchniowych, Wydawnictwo Ekonomia i Środowisko, Białystok., 1995

Supplementary literature: Polskie Normy

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 1.28

Student's independent work: 0.72