Code  |  V.10  
---|---  
Course Title (English)  |  Technology of water and wastewater treatment I  
Course Title (Polish)  |  Wybrane zagadnienia z technologii wody I ścieków  
Credits  |  3 ECTS  

| Language of instruction | English  
| Programme | Intelligent Energy, Biotechnology for Environmental Protection  
| Type of studies | BSc studies  
| Unit running the programme | Department of Chemistry, Water and Wastewater Technology  
| Course coordinator and academic teachers | Ewa Wiśniowska, PhD, Ewa Wiśniowska, PhD; Elżbieta Sperczyńska, PhD (Lec.), Ewa Wiśniowska, PhD; Elżbieta Sperczyńska, PhD (Lab.)  

| Form of classes and number of hours | Semester | Lec. | Tut. | Lab. | Proj. | Sem. | Credit points  
---|---|---|---|---|---|---|---  
| V | 15 | - | 30 | - | - | 3 |  

Learning outcomes

The objectives of the course are: to acquaint the students with basic knowledge in water and wastewater treatment processes; to develop the ability to execute and assess laboratory work required for water and wastewater quality analysis as well as to calculate technological parameters of water and wastewater treatment processes; to develop the ability to apply the knowledge in water and wastewater treatment for selecting the best treatment strategies based on influent characteristics and effluent quality requirements. After completing the course student: has a knowledge in water and wastewater treatment methods; is able to calculate technological parameters of water and wastewater treatment processes and recognize appropriate ranges for the parameters; is able to select the technology of water and wastewater treatment taking into consideration physicochemical characteristics of the influent as well as effluent quality requirements.

The students are expected to have background knowledge in chemistry, biology and unit processes in environmental engineering from previous semesters. In particular they are expected to have basic competences in engineering calculations.

LECTURE


**TUTORIALS**
Not applicable

**LABORATORY**


**Technology of wastewater treatment**: Wastewater treatment on trickling filters under aerobic conditions. Wastewater treatment with activated sludge (including BNR removal). Chemical removal of biogen compounds. Technical field trip to Wastewater Treatment Plant. Methane digestion of wastewater.

**PROJECT**
Not applicable

**SEMINAR**
Not applicable

**Form of assessment**

Laboratory: regular tests (during each laboratory), evaluation of laboratory work reports


**Basic reference materials**

**Other reference materials**
For Polish-speaking students:

**e-mail of the course coordinator and academic teachers**
ewsiowska@is.pcz.czest.pl; sperczynska@is.pcz.czest.pl

**Average student workload**
(teaching hours + individ. )
3 hours of teaching hours + 2 hours of individual work per week

**Remarks:**

**Updated on:** 04. 09. 2014