



Course title: BUILDINGS INSTALLATIONS

ECTS credit allocation (and other scores): 3.0

Semester: spring

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

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 45

Course coordinator/ Department and e-mail: Aldona Skotnicka-Siepsiak/Institute of Building Engineering
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Type of classes: classes and lectures

Substantive content

CLASSES: Knowledge and skills necessary to learn the design and implementation of sanitary installations in selected buildings. Implementation of the project of internal installations: water supply, sewage, gas and ventilation in a single-family building, and a system for draining rainwater from the building and property, allowing students to familiarize themselves with the general design principles.

LECTURES: Principles of design and implementation of internal installations: water supply, sewage, ventilation and air conditioning, gas and dehydration. Rules for calculating thermal and moisture loads in air-conditioned rooms. Rules for calculating the amount of ventilation air, selection of ventilation devices and other elements. Rules for the execution and design of water installations and equipment, sewage in buildings along with connections, gas installation, elements and systems for the drainage of the building and paved area. The rules apply to residential buildings, collective housing, public utilities and industrial facilities. Execution of the installation in accordance with the applicable technical conditions, with the necessary tests and acceptance. Basic information about electrical installations in construction.

Learning purpose: To familiarize students with selected issues of designing internal sanitary installations. Principles of basic calculations and the selection of the size of wires, fittings and collective devices will be presented. The aim of education is to prepare for the design of sanitary internal installations, taking into account applicable regulations and standards, the ability to verify technical solutions. On completion of the study programme the graduate will gain:

Knowledge: Knows the basic standards and guidelines for the design of buildings and their elements; Knows the basics of general construction and building physics regarding the migration of heat and humidity in building objects as well as the principles of design and implementation of building installations.

Skills: Is able to correctly select tools (analytical or numerical) for solving problems of analysis and design of building objects and planning construction works.

Social Competencies: Is able to work independently and cooperate in a team on a given task; Independently supplements and expands the knowledge in the field of modern processes and technologies.

Basic literature: 1) Recknagel i inni, Ogrzewanie i wentylacja, wyd. Gdańsk, t.I, 1995 ; 2) Chudzicki J., Sosnowski S., Instalacje wodociągowe. Projektowanie wykonawstwo, eksploatacja, wyd. Seidel - Przywecki, t.I, 2009 ; 3) Chudzicki J., Sosnowski S., Instalacje kanalizacyjne. Projektowanie, wykonawstwo, eksploatacja, wyd. Seidel - Przywecki, t.II, 2009 ; 4) T. Szymański, W. Wasiluk, Wentylacja użytkowa. Poradnik, wyd. -, 1999 ; 5) Klinke J., Krygier K, Klinke T., Ogrzewnictwo, Wentylacja, Klimatyzacja, wyd. WSiP, t.I., 2007



Supplementary literature:

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 47 hours

Student's independent work: 29 hours