

Title Ventilation	Code 1010101251010130352
Field Environmental Engineering First-cycle Studies	Year / Semester 3 / 5
Specialty -	Course core
Hours Lectures: 2 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 4
Language polish	

Lecturer:

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Status of the course in the study program:

Core course.

Assumptions and objectives of the course:

Knowledge of theoretical basis and practical solutions of ventilating systems in rooms and ventilating devices as well as basis of systems selection and operation in different kind of compartment.

Contents of the course (course description):

Definition of ventilation and air conditioning, classification. Parameters of outdoor climate. Parameters of climate comfort and thermal comfort. Ventilating and air conditioning loads: latent heat loads, humidity loads, emission of pollutions. Calculation of volume of ventilating air for fixed and unfixed emission of loads. Distribution of ventilating air systems. Classification and characteristic of air streams, supply air diffusers, exhaust air diffusers. Distribution of ventilating air systems in special kind of compartments. Dimensioning of air ducts, pressure line. Elements of air handling units and ventilating installation: fans, filters, heat exchangers, recuperators, rotary exchangers, weather grills, dampers, fire dampers. Structures of natural and mechanical ventilation systems. Classification of ventilation in industry buildings. Aeration, local guys, air curtains. Air cleaning devices for industry ventilating installations. Ventilating systems for different kind of industry line.

Introductory courses and the required pre-knowledge:

Fluid Mechanics, Heat Engineering.

Courses form and teaching methods:

Lectures illustrated with the assistance of multimedia, training projects of ventilation.

Form and terms of complete the course - requirements and assessment methods:

Project, written and verbal examination.

Basic Bibliography:

Additional Bibliography: