

MODULE INFORMATION SHEET

Name of Module Unit	Indoor environment engineering I
Name in polish language	Inżynieria środowiska wewnętrznego I
Module type	compulsory / elective
Form of studying	full-time day courses
Level of study	undergraduate course (B.Sc. level)
Type of study (for extra-mural courses)	-
Programme	Environmental Engineering
Speciality	Environmental Engineering
Responsible department	Air-Conditioning and Heating Department
Responsible person	Dr hab. inż. Anna Bogdan, prof WUT

Semester	Lectures(E)	Tutorials	Laboratory	Computer Exercises	Projects	ECTS
6	15	-	-	-	30	3

Objectives (summary)

The main purpose of the subject is to introduce students to detail knowledge about solutions for buildings and specific environments with different requirements.

Students should acquire the skills in determination of healthy indoor environment quality parameters for various type of buildings as well as methods for their achievement.

Prerequisites

HES (Work Environment Protection), Thermodynamics, Fluid Mechanics, Ventilation and air-conditioning systems

Rules of integrated grade setting

Arithmetic average of the 1 test from lectures and tests from practical projects.

Recommended readings

ASHRAE Handbook – Fundamentals
 REHVA Journals
 REHVA Guidebooks
 CIBSE Manuals

Contents of lectures (syllabus)

	Topics	Time (hrs.)	Scope (S / Ex)
1.	Residential ventilation system	3	Ex
2.	Displacement ventilation system	3	Ex
3.	Local Exhaust Ventilation system	3	Ex
4.	Passive buildings	1	Ex
5.	Laboratory ventilation solutions	1	Ex
6.	Hospital ventilation systems	1	Ex
7.	Kitchen ventilation solutions	1	Ex
8.	Smart Readiness Indicator	1	Ex
9.	PCM in building solutions	1	Ex
Total		15	hours

S – topics listed in the legal study programme standards from 12.07.2007

Ex – extended topics

Lecturers

Dr hab. inż. Anna Bogdan, prof WUT

Assessment method

Students will have to pass the multiple choice test.

Contents of guided projects

	Topics	Time (hrs.)	Scope (S / Ex)
1.	Designing of residential ventilation system	8	Ex
2.	Designing of Displacement ventilation system	8	Ex
3.	Designing of Local Exhaust Ventilation system	8	Ex
4.	Commissioning – analysis of indoor environment quality	6	Ex
Total		30	hours

S – topics listed in the legal study programme standards from 12.07.2007

Ex – extended topics

Persons responsible for guided projects

Dr hab. inż. Anna Bogdan, prof WUT

Assessment method for guided projects

Students will have to pass the tests from each topic.