COURSE DESCRIPTION CARD - SYLLABUS

Course name
INDOOR AIR QUALITY AND HEALTHY BUILDINGS

Course

Proposed by Discipline
Environmental engineering, energy and mining
Type of studies
Doctoral School
Form of study
full-time

Year/Semester
II/4, III/6
Course offered in
English
Requirements
elective

Number of hours

Lecture
4

Tutorials

Projects/seminars

Number of credit points

1

Lecturers

Responsible for the course/lecturer:
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Responsible for the course/lecturer:

Prerequisites

Knowledge: basics of building construction, basic knowledge in building installations.

Skills: ability to look for a scientific papers in given topic, ability to asses results based on given indexes.

Social competencies: desire to work in group to achieve the goal.

Course objective

Presenting the stat-of-the-art. in the subject of indor air quality and its impact on desiging healthy an suistainable buildings and to give opportunity to asses indor air quality in selected building based on the measurments that student may do by him/herself.

Course-related learning outcomes

Knowledge

A PhD student who graduated from doctoral school knows and understands:
1) that indoor air quality is an important factor in shaping future buildings, [P8S_WG/SzD_W01]
2) what is the-state-of-the-art in an indoor air quality research worldwide, [P8S_WG/SzD_W02]
3) what are the main goals in designing installations to provide a healthy environment for wellbeing of people, [P8S_WG/SzD_W05]

Skills

A PhD student who graduated from doctoral school can:
1) evaluate indoor air quality based on the showed results of measurments, [P8S_UW/SzD_U01]
2) prepare an opinion on indor air quality and compare it with the requirenments while working in a group, [P8S_UW/SzD_U09]

Social competencies

A PhD student who graduated from doctoral school is ready to:
1) recognizing the variability of knowledge in different areas , [P8S_KK/SzD_K03]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

PQF code	Methods for verification of learning outcomes	Assessment criteria
W01, W02, W05,	Written test.	Getting minimum 50% of points to pass (25 points to the final grade).
U01, U09	Group report on the assessment of indoor air quality based on the given measurements results.	Completeness of a report. (50 points of the grade).
K03	Inclusion of 2-3 citation from the newest worldwide literature in the report to evaluate indoor air quality.	(25 points to final grade).

Programme content

Indoor air quality – definition, indexes, requirements. Indoor air quality – worldwide state of the art. Healthy and sustainable buildings – what is a sustainable building? What is a healthy building? How to achieve a healthy building with a stat-of-the-art?

Course topics

1. Indoor air quality - basics
2. Healthy and sustainable buildings – basics
3. Practical assignment – evaluation of IAQ based on measurements and literature review
4. Test

Teaching methods

Case study, discussion, presentation.

Bibliography

Basic

Proceedings of AIVC conference and Healthy Buildings conference from the years of 2016-2024 (selected by the teacher)

Additional

Research papers on indoor air quality and healthy buildings from the years of 2016-2024 (selected by the teacher)

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	4	0
Doctoral student's own work (literature studies, report preparation) [1]	21	1,0

[1] delete or add other activities as appropriate