



FACULTY: ENVIRONMENTAL ENGINEERING

COURSE TITLE: Indoor air quality and energy conservation

Course code:

Number of contact hours: 60

Duration: 1 semester

ECTS credits: 7

Programme description: This course comprises lectures, computer simulations and projects. It covers the aspects of indoor air quality requirements, influence of contaminants on the human body, ventilation and energy conservation methods used in the building sector. The main topics of the course are listed below:

- Indoor air quality requirements and indicators for different building structures
- Indoor air pollutants and their influence on the human body
- Ventilation methods used in modern technology
- Regulation systems used for energy efficiency and maintaining indoor air quality
- Energy conservation methods used in ventilation systems
- Ventilation methods used in energy efficient dwellings

Course type: lectures (20), computer simulations (15), project (15), seminar (10)

Literature:

- W. P. Jones, „Air conditioning Engineering” 5th edition;
- C. P. Arora “Refrigeration and Air Conditioning”,



- EN 16798-15:2017-07 - Energy performance of buildings. Ventilation for buildings. Calculation methods for the determination of air flow rates in buildings including infiltration
- EN 16798-5-2:2017 - Energy performance of buildings. Ventilation for buildings. Calculation methods for energy requirements of ventilation systems
- EN16798-6:2017. Energy performance of buildings. Ventilation for buildings.
- EN 16798-7. Calculation methods for the determination of air flow rates in buildings including infiltration.

Assessment method: Written exam, individual project.

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