Exhaust Gas Treatment (O000102)

Valid as from the academic year 2016-2017

Course Specifications

Lecturers in academic year 2016-2017
Zhuiykov, Serge
LA08 lecturer-in-charge

Course offerings and teaching methods in academic year 2016-2017
A (semester 1)
lecture 30.0 h
practicum 22.5 h
guided self-study 7.5 h

Offered in the following programmes in 2016-2017
 Bachelor of Science in Environmental Technology 5 A

Teaching languages
English

Keywords
The atmosphere, air quality management, air pollution, exhaust gases treatment, unit processes in waste gas technology.

Position of the course
Introduction in the field of atmospheric pollutions and exhaust gases treatment.

Contents
1. Air pollution (gaseous pollutantas and particular matter)
2. Atmospheric dispersion
3. Carbon adsorbers
4. Wet scrubbers
5. Incinerators
6. Post combustion treatment
7. Refrigerated condensers
8. Advanced oxidation oricesses
9. Gravity settling chambers
10. Cyclones
11. Baghouses and filters
12. Wet scrubbers for PM control
13. Electrostatic precipitators

Initial competences
Basic knowledge of chemistry, physics physical chemistry and mathematics, environmental chemistry.

Final competences
Knowledge of natural atmospheric cycles, main exhaust pollutants, concentrations and the way they can be reduced and eliminated; knowledge of impact of exhaust emissions on environment and humans; skills in designing air pollution abatement systems.

Conditions for credit contract
Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract
This course unit cannot be taken via an exam contract

(Approved)
Teaching methods
Guided self-study, lecture, practicum

Learning materials and price

References

Course content-related study coaching

Evaluation methods
end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period
Written examination with open questions

Examination methods in case of periodic evaluation during the second examination period

Examination methods in case of permanent evaluation
Participation

Possibilities of retake in case of permanent evaluation
examination during the second examination period is possible in modified form

Calculation of the examination mark
Final written examination with open questions 80%
Participation 20%

(Approved)