

Nazwa w jęz. angielskim: Emission and transport of air pollutants
Nazwa w jęz. Polskim: Emisja i transport zanieczyszczeń powietrza

Dane dotyczące zajęć:
Information on course:

Jednostka oferująca przedmiot: Wydział Inżynierii Środowiska i Energetyki // dr hab. inż. Ewa Brągoszewska, prof. Pol. Śl.

Course offered by department: Faculty of Energy and Environmental Engineering // dr hab. inż. Ewa Brągoszewska, prof. Pol. Śl.

Język wykładowy:
angielski
Language:
English
Strona WWW: Course homepage:
Short description:
The main aim of the course is to provide students with a scientific background in air pollution monitoring, pollution control technologies and environmental management. Students will also be introduced to the European legislative framework on air quality and to international conventions.
Description:
Lecture 1. Major air pollutants and their sources. 2. Indoor and outdoor air pollution and its impact on environment and human health. 3. Methods of emission control. 4. Regulatory and institutional framework controlling air quality management in Europe and international conventions. Project The project part of the course is the design of an air nozzle. The project consists of two parts - the first concerns the evaluation of the operation of a round nozzle with a flange, the second concerns the concept of streamlining or optimizing the nozzle, and proposing the nozzle concept. The second part of the project consists also prepare a technical drawing of nozzle views with dimensions and a 3D view. Contact hours Lecture: • full-time studies: 15h Project: 30h • full-time studies: 30h Number of ECTS credits: 4
Bibliography:
1. Gerald R. North, John A. Pyle, Fuqing Zhang, <i>Encyclopedia of Atmospheric Sciences</i>, V1-6, Academic Press, Burlington, 2014 2. Schnelle K.B., Brown C.A., <i>Air pollution control technology handbook</i>, CRC, Boca Raton, 2002 3. Flagan R.C., <i>Fundamentals of air pollution engineering</i>, Prentice-Hall, New Jersey, 1988 4. Vallero D.A., <i>Fundamentals of air pollution</i>, Academic Press, Burlington, 2008
Learning outcomes:
Knowledge:

1. The student has knowledge in the field of air pollution characteristics and assessment of health effects of exposure to air pollution.

Skills

Student is able to:

1. Communicate on specialist topics with diverse groups of recipients, as well as conduct a debate, present and justify different opinions and positions.
2. use a foreign language at the B2 + level of the European System of the Description of Language Education and specialist terminology.

Social competences

Student is ready for:

1. Recognition of the importance of knowledge in solving cognitive and practical problems and consulting experts in the event of difficulties in solving the problem.

Assessment methods and assessment criteria:

Lecture:

1. Individual presentations on the topic discussed (60% of the final grade).
2. Student activity during lectures, manifested by participation in the discussion, formulating questions on the topic on their own (40% of the final grade).

Project:

1. Execution and handing over of the 2 parts of the project.

Przynależność do grup przedmiotów w cyklach: Element of course groups in various terms:

Opis grupy przedmiotów Course group description	Cykl pocz. First term	Cykl kon. Last term
przedmioty obieralne studia stacjonarne stopień studiów – dowolny kierunek studiów – dowolny, semestr dowolny elective courses full-time degree - any field of study - any semester - any	2024/2025	