COURSE DETAIL

AIR QUALITY
Country Netherlands
Host Institution Wageningen University and Research Center
Program(s) Wageningen University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Environmental Studies Earth & Space Sciences
UCEAP Course Number 109
UCEAP Course Suffix
UCEAP Official Title AIR QUALITY
UCEAP Transcript Title AIR QUALITY
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

This course is directed at understanding specific air quality issues in 3 themes: 1) at the global 2) regional and 3) local (urban) scale. At each scale, the focus is understanding the life cycle of natural and anthropogenic air pollutants, i.e., the processes behind emission, transport in the atmosphere, chemical conversions, and deposition on the land/ocean surface. The role of meteorology on air pollution mixing and transport is explicitly explained on each scale. The course pays attention to the effects on human and environmental health, as well as the feasibility of alternatives and the efficiency of regulation and policy. On the global scale, the focus is on tropospheric chemistry, the greenhouse effect, and stratospheric ozone. On the regional scale, the focus is on the deposition of air pollutants (clouds, precipitation, wet deposition, dry deposition), acidification, and eutrophication, with ample examples by means of the nitrogen cycle. At the local scale, the focus is on traffic and industrial emissions, the role of vegetation, and photochemical smog. Each theme is completed with a tutorial, in which problem-solving is practiced as exam training.

Language(s) of Instruction
English

Host Institution Course Number
MAQ11306

Host Institution Course Title
AIR QUALITY

Host Institution Course Details
https://wur.osiris-student.nl/#/onderwijscatalogus/extern/cursus

Host Institution Campus
Wageningen University

Host Institution Faculty
Environmental Sciences

Host Institution Degree
Host Institution Department Meteorology and Air Quality
Course Last Reviewed 2022-2023

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