

## 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 Campus

Wageningen University

### Host Institution Faculty

Environmental Sciences

### Host Institution Degree

### Host Institution Department

## Meteorology and Air Quality

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