

Prof. Dr. Sascha Nehr

4 semester hours

Kick-off, discussion & presentation meetings:
Monday | 09:00-11:45 | 05.E.008

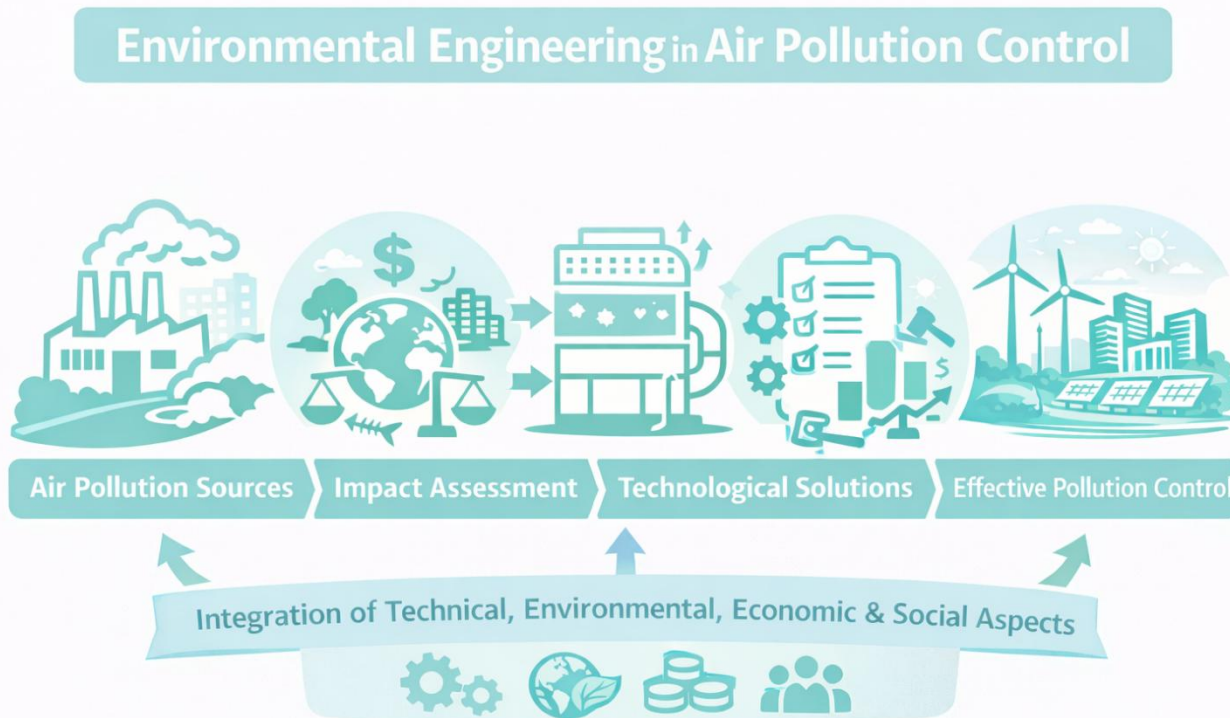
Performance of exposure measurements:
in the afternoons | 16:00-18:00 | City of Düsseldorf

Start: 05.10.2026

60 h contact time | 90 h self-study

5 CP

15-minute oral presentation plus written
homework assignment



Why to choose the elective „Environmental Engineering Project Studies“?

- Be part of the prestudy „**HARP** — *Healthy Air Routing Paths*“
- Conduct your own air pollution exposure assessment by walking through the City of Düsseldorf
- Use state-of-the-art measurement equipment in groups of 2 students in your own measurement campaign
- Apply sophisticated data analysis tools like QGIS, Origin Pro & Python

Contents

- Planning and design of air pollution control measures
- Selection and specification of real-world air pollution control measures (e.g., in urban areas)
- Data collection, standards research, and literature review
- Insights into pollution sources, dispersion and the urban microclimate
- Development your own measurement route, considering, e.g., building structures, road conditions
- Learn how to assess dispersion conditions to choose a healthier pathway through the city

Real-world applications of „Environmental Engineering Project Studies“!

- Support the development of Düsseldorf's clean air plans
- Gain insights in future regulatory requirements launched by the European Union
- Explore the perspectives of different stakeholders involved in urban air quality management

Learning outcomes

- Understand fundamental principles of air pollution control
- Analyze technical, environmental, economic, and social factors in air pollution projects
- Apply air pollution control technologies to real engineering problems
- Evaluate solutions based on feasibility, impact, cost, and regulation
- Develop and present innovative air pollution control strategies