

Atmospheric Chemistry and Physics

7.5 ECTS

Course responsible: Claudia Mohr

This course provides an introduction into the basic chemical and physical processes taking place in the atmosphere (prerequisite for courses “Aerosols, Clouds, and Climate”, and “Air Quality”), and how they are measured and investigated (theoretically, practical work is part of the courses “Environmental field work” and “Environmental lab studies”).

Contents:

- Introduction in the atmosphere
- Atmospheric trace constituents
- Chemistry of the troposphere
- Aerosols
- Radiative effects of aerosols and gases
- Global cycles
- Cloud physics
- Wet and dry deposition
- Introduction into climate data and visualization (General circulation, transport models, and statistical models)

Course literature:

Atmospheric Chemistry and Physics by Seinfeld and Pandis, Wiley

Chemistry of the upper and lower atmosphere by Finlayson-Pitts, Academic Press