

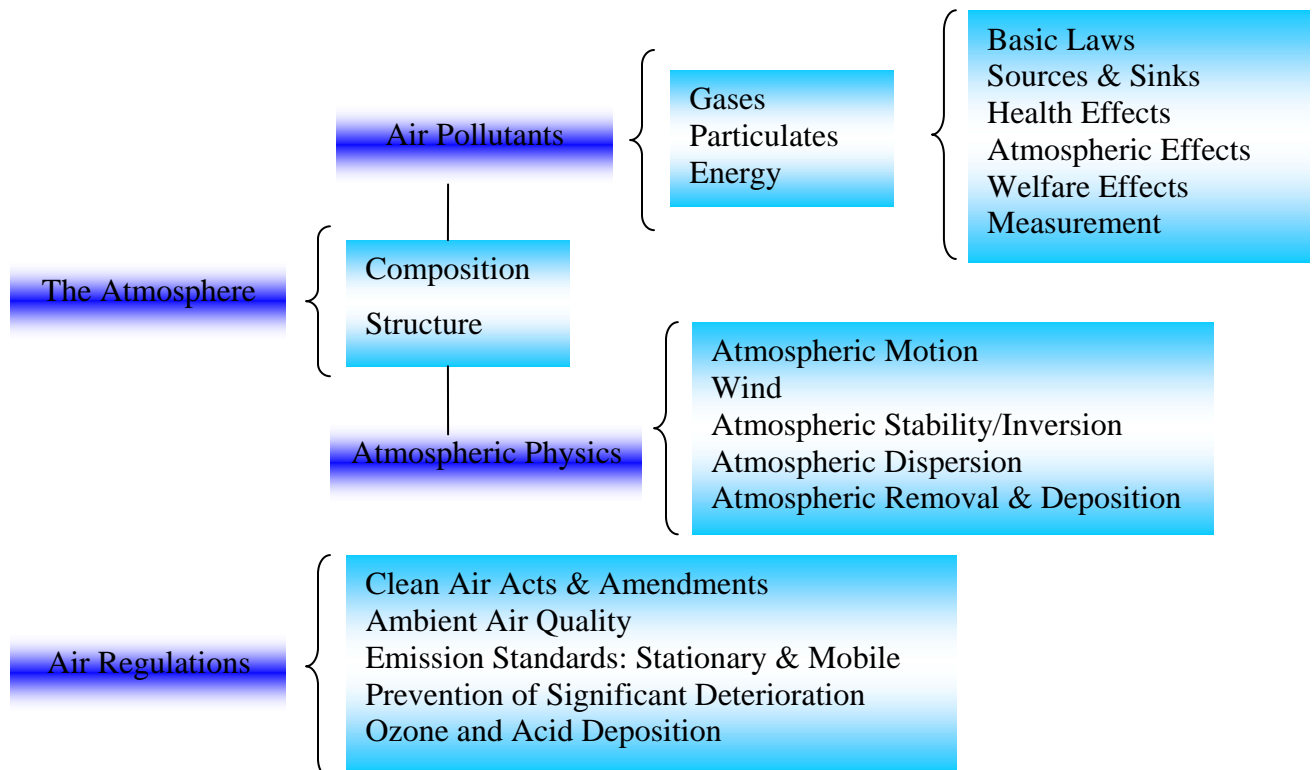
ENV 4101 Elements of Air Pollution

ENV 5105 Foundations of Air Pollution

Spring 2007
M&W Periods 3-4, NEB 386

Clean air is important because we **can not live without air for more than a few minutes!** Air pollution causes harms to animals and plants, results in damages to structures and properties, and interfere visibility. Episodes of serious air pollution causing many deaths have been reported in the history numerous times (e.g. 1948 Donora Smog and 1952 London smog), and chronicle health effects resulting from air pollution have also been documented. In a global scale, it also affects the climate. No wonder it has been reported by Congress that the passage and implementation of clean air regulations contribute to more than 90% of the benefits of all environmental regulations!!!

To improve the air quality we breathe and to wisely utilize the air resources we have, the first thing is to get to know the air surrounding us. In this class, we will accomplish this goal by learning the four key aspects of this subject, which are presented in the diagram below:



[SYLLABUS](#)
[SCHEDULE](#)

HOMEWORK

HW1	HW2	HW3	HW4
HW1-Solution	HW2-Solution	HW3-Solution	HW4-Solution

CLASSNOTE

- [Introduction](#)
- [Structure and Composition of the Atmosphere](#)
- [Basic Concepts of Gases and Particulates](#)
- [Gaseous Pollutants](#)
- [Particulate Pollutants](#)
- [Health Effects of Air Pollution](#)
- [Atmospheric Effects of Air Pollution](#)
- [Welfare Effects of Air Pollution](#)
- Stoichiometry and Equilibrium
- Kinetics
- Atmospheric Reaction
- Scale of Motion
- Atmospheric Stability
- Gaussian Model
- Monitoring: Particulate Pollutants, Gaseous Pollutants
- Air Regulations

POTENTIAL REFERENCE RESOURCES

- [Psychrometric chart](#), [Psychrometric practice problems](#),
- EPA Links, [AP-42](#), [Federal Rules Query](#), [Federal regulation overview](#), [40 CFR](#), [Emissions testing methods](#)

PROJECT

- [Guideline for Project Proposal](#)
- [Guideline for Final Project Report](#)
- [Guideline for Project Presentation](#)

EVALUATION FORMS

- [Midterm-Self Evaluation Form](#)
- [Final-Self Evaluation Form](#)
- [Team Member Evaluation Form](#)

RELATED LINKS

- [Graph Paper](#)