

# CEE 490/ENV H 461 Air Pollution Control

M-W 10:30-12:20; 105 Loew Hall

Professor Tim Larson, (tlarson@uw.edu)

Website: <https://canvas.uw.edu/courses/1137683>

There is not a required textbook for this class.

Notes and assignments will be posted on the course website.

## Criteria Pollutants

- Air Quality Standards

- Smog Basics

- Health Effects

## Stationary Source Regulations and Testing

- Air Permits

- Toxic Air Pollutants

- Aerscreen Dispersion Model

- EPA source test methods and sampling calculations

- Continuous emission monitoring:

## Stationary Source Controls

### Control of Particulate Emissions

- Properties of Particles

- Settling chamber

- Cyclone

- Fabric Filters

- Electrostatic Precipitator

- Particulate Scrubbers

### Control of Hydrocarbon Emissions

- Adsorption

- Condensation

- Incineration

- Biofiltration

### Control of Inorganic Gaseous Emissions

- NO<sub>x</sub>,

- SO<sub>2</sub>

- Hg

- CO<sub>2</sub>

## Mobile Source Controls

### Regulations

- Federal and California Emission Standards
- Fuel Economy Standards
- Renewable Fuel Standards

### Control Technologies

- Vehicles
- Fuels
- Exhaust gas treatment

### Emission Estimation Tools

- MOVES2010
- AFLEET

Grading:	Homework:	20%
	Group Presentations	15%
	Midterm:	30%
	Final:	35%

Some Textbooks on this subject:

“Air Pollution Control: A Design Approach” 4<sup>th</sup> Edition by Cooper and Alley, Waveland Press, 2010

“Air Pollution Control Engineering” by DeNevers, Waveland Press, 2010

“Air Quality” 5<sup>th</sup> Edition by Godish, Davis and Fu CRC Press, 2014

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