



**Course Name:**

Air Pollution and its Control Methods

<b>Course Number:</b> 20-637	<b>Credit:</b> 3
<b>Program:</b> Graduate	<b>Course Type:</b> General Selective
<b>Prerequisite:</b> -	<b>Corequisite:</b> -

**Course Description (Objectives):**

The course aims to provide an understanding of air pollution sources, effects, and control methods, focusing on both theoretical and practical approaches. It covers pollutant dispersion, aerosol mechanics, and technologies for controlling various pollutants, including sulfur oxides, nitrogen oxides, and volatile organic compounds.

**Course Content (outline):**

- Chapter 1: Introduction to Air Pollution
- Chapter 2: Pollution Dispersion and Modeling
- Chapter 3: Aerosol Mechanics
- Chapter 4: Cyclones
- Chapter 5: Scrubbers
- Chapter 6: Electrostatic Precipitators (ESPs)
- Chapter 7: Fabric Filters
- Chapter 8: Properties of Gases and Vapors
- Chapter 9: Gas Adsorption and Absorption
- Chapter 10: VOC Incineration
- Chapter 11: Control of Sulfur Oxides
- Chapter 12: Control of Nitrogen Oxides
- Chapter 13: Mobile Sources

**References:**

- "Air Pollution Control," Cooper, C.D. & Alley, F.C., Waveland, 3rd Ed., Illinois, 2002.
- "Proposed Papers and Reports"
- "Air Pollution: Its Origin and Control," K. Wark, et al., Prentice Hall, 1997.
- "Air Pollution Control Engineering," Noel de Nevers, 2nd Ed., McGraw Hill, 2002.
- "Atmospheric Physics and Chemistry of Air Pollution," J.H. Seinfeld & S.N. Pandis, John Wiley & Sons, 2nd Ed., 2006.