

**Course Name:**

Air pollution and its control methods

**Course Number:**

20637

**Credit:**

3

**Course Content (outline):**

- Introduction to Air Pollution: Air Pollutants, their Origin, Effects and Standards and Atmospheric Structure
- Pollution Dispersion and Modeling
- Aerosol Mechanics
- Cyclones
- Scrubbers
- Electrostatic Precipitators (ESPs)
- Fabric Filters
- Properties of Gases and Vapors
- Gas Adsorption and Absorption
- VOC Incineration
- Control of Sulfur Oxides
- Control of Nitrogen Oxides
- Mobile Sources

**References:**

- “Air Pollution Control”, Cooper, C.D. & Alley, F.C., Waveland, 3<sup>rd</sup> 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, 2<sup>nd</sup> Ed., Mc Graw Hill, 2002.
- “Atmospheric physics and chemistry of air pollution”, J.H. Seinfeld, & S.N. Pandis, John Wiley & Sons, 2<sup>nd</sup> Ed, 2006.
- “Aerosol Technology: Properties, Behavior, and Measurement of Airborne Particles”, 2<sup>nd</sup> Ed., John Wiley & Sons, 1999.