Year & Sem	Course Code: CE3605	Course Name: **Air Pollution and Control**	No. of Credits: 4	L	T&PS	P
				2	2	0

UNIT – I:Introduction to Air pollution

Air Pollution – Definitions, Scope, Significance and Episodes, Air Pollutants – Classifications – Natural and Artificial – Primary and Secondary, point and Non- Point, Line and Areal Sources of air pollution- stationary and mobile sources

UNIT – II: Effects of Air pollution

Effects of Air pollutants on man, material and vegetation: Global effects of air pollution – Green House effect, Heat Islands, Acid Rains, Ozone Holes etc.

UNIT-III :Thermodynamics and Kinetics of Air pollution

Thermodynamics and Kinetics of Air-pollution – Applications in the removal of gases like SOx, NOx, CO, HC etc., air-fuel ratio.

UNIT – IV: Meteorology and plume Dispersion

Meteorology and plume Dispersion; properties of atmosphere; Heat, Pressure, Wind forces, Moisture and relative Humidity, Influence of Meteorological phenomena on Air Quality-wind rose diagrams.

UNIT-V: Plume Dispersion Model

Lapse Rates, Pressure Systems, Winds and moisture plume behavior and plume Rise Models; Gaussian Model for Plume Dispersion.

UNIT-VI: Control of Air pollution

Control of particulates – Control at Sources, Process Changes, Equipment modifications, Equipment's – Settling Chambers, Centrifugal separators, filters Dry and Wet scrubbers, Electrostatic precipitators.

References/Text Books:

1. Air pollution By M.N.Rao and H.V.N.Rao – Tata Mc.Graw Hill Company.
2. Air pollution by Wark and Warner.- Harper & Row, New York.
3. An introduction to Air pollution by R.K. Trivedy and P.K. Goel, B.S. Publications.

Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.