**Fundamentals of Air Pollution (CHE 272)**

**Credit Hours:** 3

**Course Pre-Requisites:** None

**Instructor:** Qasim Imtiaz

**Schedule:** Monday to Friday (11 AM – 1 PM)

**Course Description**

Air pollution is a very complex societal problem. On a small scale, point-source releases of individual air pollutants cause localized responses ranging from annoyance to physical injury. For example, in urban areas high concentrations of gases and particles from coal combustion and, in more recent decades, motor vehicles have produced severe loss of air quality and significant health effects. On a regional scale, tropospheric ozone formation and acid deposition have been the major threats. Emissions of carbon dioxide and other radiative active gases, together with stratospheric ozone depletion, represent planet-scale assaults on the quality of our atmospheric environment. In order to restore air quality that we need for our very survival, the extent of the crisis has to be appreciated and addressed by the population at large. This introductory course is designed to cover the whole gamut of air pollution issues from a quantitative standpoint. It will give the participants not only a holistic overview of air pollution, but also detailed information about the formation, propagation and measurement of gaseous and particulate air pollutants, area and mobile sources of air pollution, ambient and indoor air quality measurement, and different air pollution control and mitigation strategies. At the end of the course, the participants will learn about the sampling and assessment techniques for some common air pollutants.