

# CHEMICAL ENGINEERING DEPARTMENT ANNOUNCEMENT

## **Fundamentals of Aerosol Technology: Applications to Air Pollution, Nanoparticle Technology and Clean Room Design**

WINTER QUARTER 2001  
Chemical Engineering C140/C240

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### TOPICS

1. Particle size and size distributions
2. Particle transport and deposition: applications to gas cleaning (filtration, electrostatic precipitation, etc.)
3. Optical properties of aerosols
4. Physical and chemical measurement systems
5. Aerosol dynamics: coagulation, growth, coalescence, population balance theory
6. Nanoparticles and their aggregates
7. Industrial applications: aerosol reactors
8. Atmospheric applications: atmospheric aerosol dynamics, source resolution

**Instructor:** Professor S. K. Friedlander  
**Time/Location:** TuTh 10-12/4283 Boelter Hall  
**Prerequisite:** Permission of Instructor (undergraduate transport phenomena and/or physical chemistry)  
**Text:** *Smoke, Dust and Haze: Fundamentals of Aerosol Dynamics*, Oxford University Press, 2000.

For further information, call Professor S. K. Friedlander, 5531 Boelter Hall, 825-2206