



Fluid Properties and Units

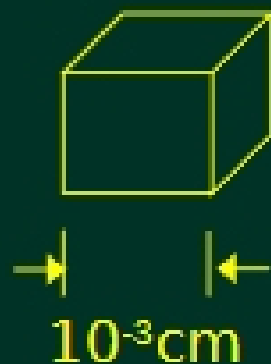
CVEN 311

Continuum

- ▶ All materials, solid or fluid, are composed of molecules discretely spread and in continuous motion.
- However, in dealing with fluid-flow relations on a mathematical basis, it is necessary to replace the actual molecular structure by a hypothetical continuous medium, called the continuum.

Continuum

- ▶ In a continuum, the physical variable at a point in space is the averaged value of the variable in a small sphere.
- How good is the assumption?



3×10^{10} molecules of air