Physics 111 - Lecture 9
Bulk Matter

States of Matter

- **solid**: fixed shape, fixed volume
- **liquid**: variable shape, fixed volume
- **gas**: variable shape, variable volume

Bulk Properties of Matter

**Density**

\[ \rho = \frac{m}{V} \]

**Pressure**

\[ P = \frac{F}{A} \]
units N/m²=Pa

Fluids

- pressure in fluid exerted in all directions
- pressure acts perpendicular to any surface

\[ P = \rho gh \]