

Topic Page: [fluid mechanics](#)

Definition: **fluid mechanics** from *Philip's Encyclopedia*

Study of the behaviour of liquids and gases. **Fluid statics** is the study of fluids at rest and includes the study of pressure, density and the principles of Pascal and Archimedes. **Fluid dynamics** is the study of moving fluids and includes the study of streamline flow, Bernoulli's law (used to measure a fluid's velocity) and the propagation of waves. Engineers use fluid mechanics in the design of bridges, dams and ships. Aerodynamics, the study of the motion of gases, and **hydrodynamics**, the study of the motion of liquids, are branches of fluid mechanics.

Summary Article: **fluid mechanics**

From *The Columbia Encyclopedia*

branch of mechanics dealing with the properties and behavior of fluids, i.e., liquids and gases. Because of their ability to flow, liquids and gases have many properties in common not shared by solids. The special study of fluids in motion, or fluid dynamics, makes up the larger part of fluid mechanics. Branches of fluid dynamics include hydrodynamics (study of liquids in motion) and aerodynamics (study of gases in motion). Hydrodynamics is often used synonymously with fluid dynamics, since most of the results from the study of liquids also apply to gases. A plasma is also a fluid (see states of matter) and can be described by many of the principles of fluid mechanics, but its electromagnetic properties must also be taken into account. The study of plasmas in motion is known as magnetohydrodynamics and includes principles from several fields.

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fluid mechanics. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from https://search.credoreference.com/content/topic/fluid_mechanics



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"fluid mechanics." *The Columbia Encyclopedia*, Paul Lagasse, and Columbia University, Columbia University Press, 8th edition, 2018. *Credo Reference*, https://search.credoreference.com/content/topic/fluid_mechanics. Accessed 22 Nov. 2019.